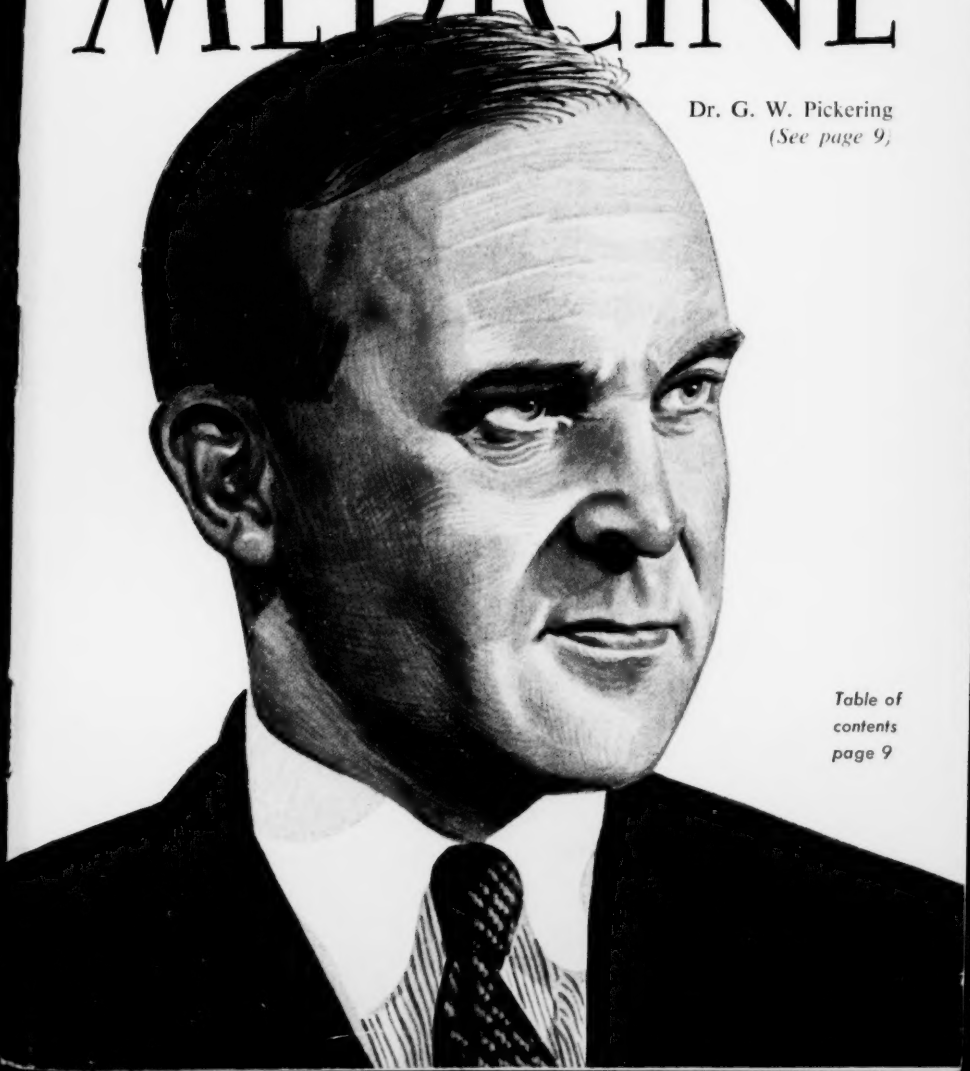
APRIL 15, 1953

MODERN MEDICINE

The Journal of Diagnosis and Treatment



Dr. G. W. Pickering
(See page 9)

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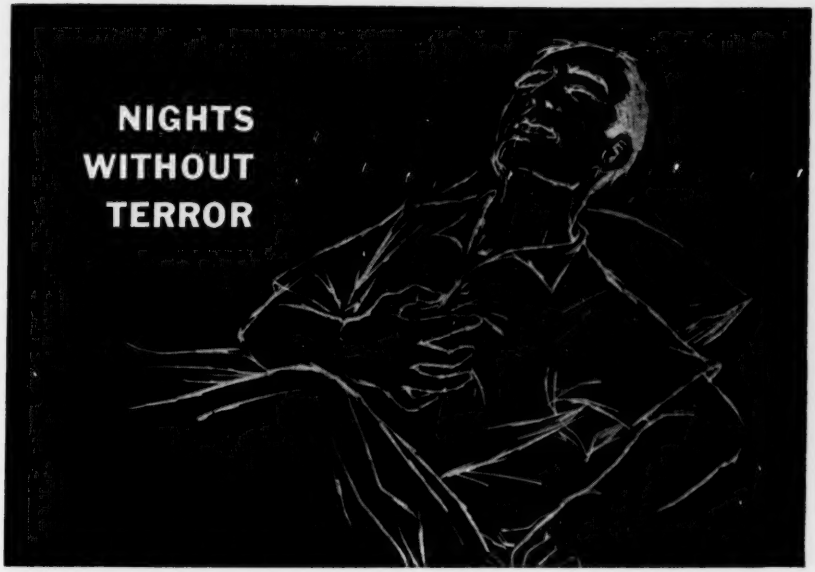

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1. Humphreys, P., et al.: Angiology 3:1 (Feb.) 1952.
2. Plotz, M.: New York State J. Med. 52:2012 (Aug. 15) 1952.
3. Perlman, A.: Angiology 3:16 (Feb.) 1952.

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1. Lobitz, W. C., Jr., and Jillson, O. F.: Postgrad. Med. 12:2, 1952.
2. Goodman, H.: J.A.M.A. 129:707, 1945.
3. Underwood, G. B., et al.: J.A.M.A. 130:240, 1946.
4. Lubowe, I. I.: New York State J. Med. 50:1743, 1950.
5. Nomland, R.: Postgrad. Med. 11:412, 1952.

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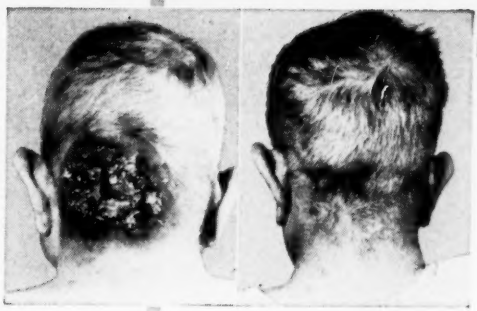

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THE MAN ON THE COVER is Dr. G. W. Pickering, Professor of Medicine at the University of London. Since 1939 Dr. Pickering has been Director of the Medical Clinic at St. Mary's Hospital. He is a fellow of the Royal College of Physicians and a member of the University Grants Commission. Editor of *Clinical Science*, Dr. Pickering has been a frequent contributor to medical journals on the subject of vascular disease. The report on page 78, concerning "Malignant Hypertension," is based on an article appearing originally in *Circulation*.

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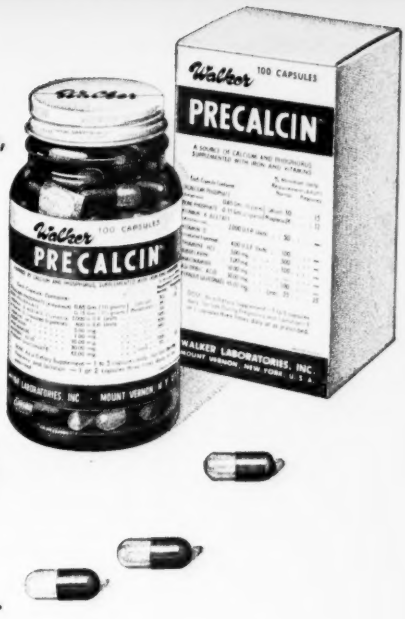

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LETTER FROM THE EDITOR

Dear Reader:

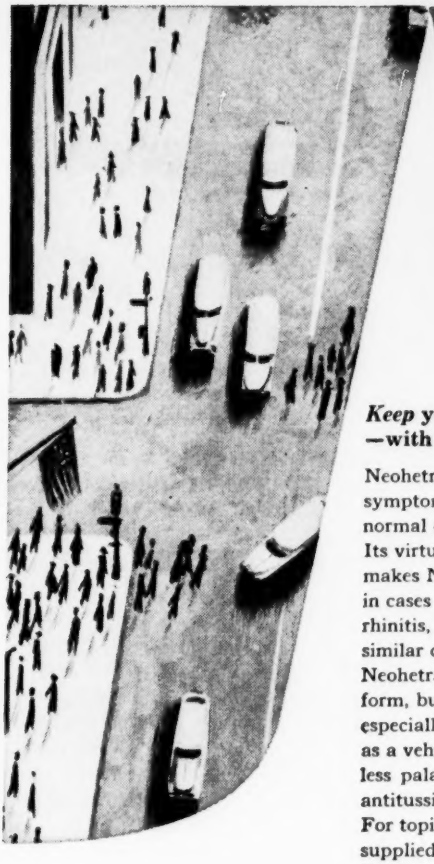
One of the ambitions of the editors of *Modern Medicine* is to bring quickly to our readers notes of important discoveries in our field. Occasionally an important discovery is not sufficiently noted, and then it lies forgotten for years. It is not brought to the attention of enough men, or it is not brought to them in such a way as to excite their lasting interest.

For instance, way back in 1899 Emmerich and Loew wrote about the remarkable antibiotic properties of a substance which could be extracted from old cultures of *Bacillus pyocyaneus*. Evidently these authors were mighty close to the discovery that was later to make Fleming and Florey famous. In 1902 Loew and Korschum and in 1928 Papacostas and Gates elaborated on the idea of getting an antibiotic from bacteria. I remember reading their papers, and I remember that for a while a few men tried the substance clinically. Apparently they soon became discouraged, because interest in the idea lapsed. Before it lapsed other substances such as gentian violet were injected intravenously with the hope that they would be bacteriostatic.

How unfortunate it was that some gifted men did not get sufficiently interested in the *pyocyaneus* material to go ahead and discover penicillin or some other of our modern antibiotics. Perhaps, if in those days there had been a *Modern Medicine*, bringing new medical ideas forcibly to the attention of physicians everywhere, millions of lives would have been saved.

Walter C. Alvarez

EDITOR-IN-CHIEF



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Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Responsibility for Vasectomy

TO THE EDITORS: In Questions and Answers, two operations for vasectomy are illustrated *(Modern Medicine*, Feb. 15, 1953, p. 32).

All of us have young patients who want this operation done. I have been told that the U.S. Supreme Court has ruled the procedure illegal and that a surgeon who does it subjects himself to the probability of a suit for malpractice even though both husband and wife sign a statement authorizing the operation.

GEORGE R. LIVERMORE, M.D.
Memphis

¶ Vasectomy is justified only in presence of a definite medical indication. It should never be done as a matter of convenience for young patients who do not want to be bothered with contraceptive measures.—Ed.

Recommended for Speakers

TO THE EDITORS: Your report of Dr. Richard A. Kern's comment on how to present a scientific paper *(Modern Medicine*, Dec. 15, 1952, p. 138) is highly recommended for distribution to scheduled speakers at any medical gathering. Every point is well taken.

On the subject of microphone manners, I have felt for a long time that "it's time for a change." However, instead of telling the speaker to remain glued a certain number of inches from the microphone (a suggestion no speaker absorbed in his subject will be able to follow), and instead of requesting him to carry the microphone when turning toward the projecting screen, why not invent a contraption similar to the one telephone operators use, fixing the prescribed distance of the microphone from the mouth by attaching it to a truss-like spring with 2 padded ends the speaker can clamp gently to the sides of his neck?

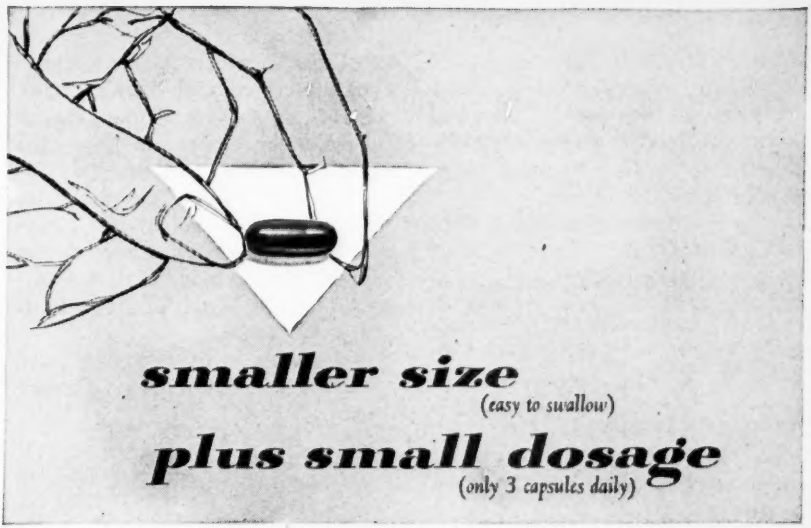
Our future speaker may then turn to the screen or walk temperamentally up and down the platform, rock back and forth, stand upright, or lean forward to his heart's delight, without fear that one single syllable will be unheard.

WALTER CANE, M.D.
Hempstead, N. Y.

¶ Lapel and collar microphones are now quite generally used.—Ed.

Library Contribution

TO THE EDITORS: I have read in the February 15, 1953, issue of



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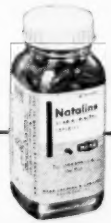

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Modern Medicine the request of Viswanath Hede (p. 18).

I have 24 volumes of *Medical Clinics of North America* (1943-46). I would like to send these books over to Dr. Hede.

JULIUS P. ALSBERG, M.D.
Bakersfield, Calif.

¶ For other readers who may want to send books to the new medical library being started by Viswanath Hede, his address is: Fontainhas, Panjim, Goa, India.—Ed.

Mistaken Identity

TO THE EDITORS: In the paragraph entitled "The Man on the Cover" (*Modern Medicine*, Feb. 1, 1953, p. 11), Dr. Charles S. Cameron, Medical and Scientific Director of the American Cancer Society, is also credited with being Chairman of the Cancer Committee of the American College of Surgeons.

I beg to inform you that Dr. Edwin P. Lehman of Charlottesville, Va., is the chairman of our Committee on Cancer. Dr. Lehman was appointed chairman of this committee by the Board of Regents in September 1950.

WALTER E. BATCHELDER, M.D.
Secretary, Committee on Cancer
Chicago

'Suction Only' for Ulcer

TO THE EDITORS: Apropos of the continuing discussions for and against nonoperative "suction only"

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Am. J. Med. *4*:875, 1948. Slaughter, Donald; Grover, Wm. C., and Hawkins, Richard. Report to American Therapeutic Society, Boston, 1950.

treatment of perforated peptic ulcer, a small series of cases so treated in the past four years prompts the following suggestions:

• To help prevent the complication of subdiaphragmatic or other intraperitoneal abscess, when I first diagnose perforation in the home, I invariably give 1 or 2 tablets of combined antibiotics such as Cilloral with sulfa, with no more water than is needed to swallow them—usually less than an ounce. If the ulcer is still patent and permits intraperitoneal escape of contaminated gastric fluid, this maneuver will place the antibiotic right where it is needed until hospitalization is effected and suction begun. This treatment is immediately supplemented by high doses of combined antibiotics systemically.

• To determine who should be operated upon, and who merely intubated will ever be a problem of art rather than a formulated scientific rule. If general peritoneal spread is indicated clinically, operation should be immediate because the patient's condition may never be better for operation either bacteriologically, nutritionally, or in regard to the amount of bowel distention. However, if the perforation has been most recent and signs are not far advanced, or if the perforation has occurred hours before but pain and distention are localized to the epigastrium and/or back, several hours of conservative, constant, sure suction should certainly be employed, coupled with antibiotic therapy and parenteral fluids with ascorbic acid. The Levin tube or the Cantor tube, because of its protected end and large aperture, should be most carefully placed and then not moved.

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- no interference with phagocytosis
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Formula: *Furacin Nasal plain* contains Furacin 0.02% ® brand of nitrofurazone N.N.R. dissolved in buffered, isotonic, aqueous solution. *Furacin Nasal with ephedrine* contains in addition, ephedrine·HCl 1%. 1 oz. bottles.

Literature on request

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The NITROFURANS
A unique class of antimicrobials

OTHER DOSAGE FORMS OF FURACIN INCLUDE:
FURACIN SOLUBLE POWDER • FURACIN VAGINAL SUPPOSITORIES • FURACIN OPHTHALMIC

The clinical impression of "cure" that follows arrest of pain cannot be immediate. I have remained with and "specialed" a patient from 3 A.M. to 7 A.M. before relief of pain and subsidence of signs have permitted me to feel confident of having delayed and finally canceled surgery.

Many more statistics on carefully described cases will have to be compiled before we may fit this procedure into its proper niche in our individual armamentaria. And, even then, the decision to employ it will surely rest on judgment passed on the merits peculiar to the case at hand, not upon any established rule such as that to which some authors even now adhere in their routine operating for diagnosed perforated peptic ulcers.

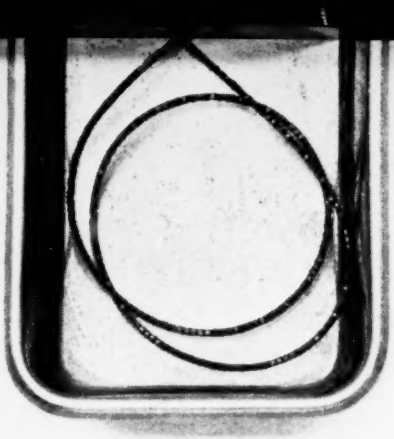
PRESTON J. BURNHAM, M.D.
Salt Lake City

Not Group Practice

TO THE EDITORS: An error appeared in the Washington Letter (*Modern Medicine*, Jan. 15, 1953, p. 64) in an item concerning a distinguished citizen of Houston, Mrs. Oveta Culp Hobby, Administrator of the Federal Security Agency. The statement concerning Mrs. Hobby closes with the line, "She is a trustee of the Texas Medical Center, a large group-practice institution associated with the University of Texas."

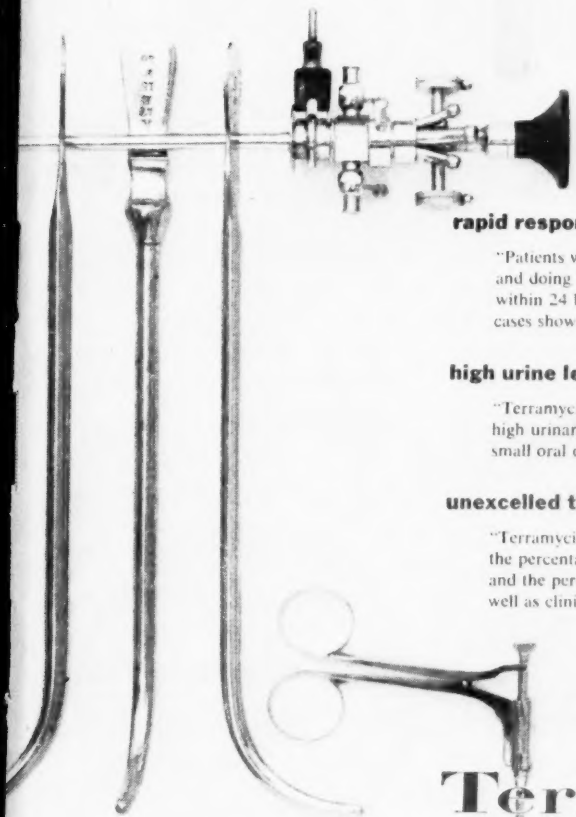
The plan of operation of the Texas Medical Center is directly opposed to the idea of "group practice." The University of Texas operates only a small number of the institutions in the Center. The

(Continued on page 32)



read Pfizer Spectrum weekly in the J.A.M.A.

IN URINARY TRACT INFECTIONS



rapid response

"Patients with pyelitis were well and doing their usual duties within 24 hours . . ."[1] ". . . resistant cases showed remarkable response."[2]

high urine levels

"Terramycin was selected . . . in view of high urinary excretion rate following small oral doses of the antibiotic."[1]

unexcelled toleration

"Terramycin is generally well tolerated, the percentage of relapses being low and the percentage of bacteriological as well as clinical cures high."[3]

1. Canad. M. A. J. 66:151 (Feb.) 1952.
2. J. Urol. 67:762 (May) 1952.
3. Ibid. 69:315 (Feb.) 1953.

Terramycin

BRAND OF OXYTETRACYCLINE

Pfizer

PEDIATRICS BULLETIN

Prepared In The Interests Of The Profession By The Pediatrics Consultant Staff Of H. J. Heinz Company

Security in **DISCIPLINE**

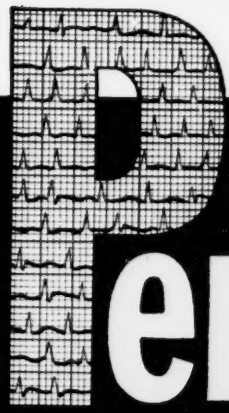
THE PHYSICIAN working with children frequently is forced to make decisions in the controversial field of child psychology. He has been urged to swing from the old rigid training and feeding programs to one where free expression of impulses is allowed the child, who, as an infant, is expected to select the time and amount of his feeding, and later to decide his hourly program for amusement and education.

● **The Physician** may believe that many a young child derives a great feeling of security from a routine and discipline against which he at times protests. If we indulge in the philosophical speculation prevalent in fields of emotional development, we can understand that many children cannot quickly accept the loss of intrauterine containment for an independent life. It seems wrong to force some small children prematurely to make all decisions as to when and what they shall eat, when and how they shall play, go to bed, or study, as this may lead to unhappiness, confusion, and lack of security. Many normal children still develop into strong-minded and intelligent individuals with normal initiative under a system of sympathetic discipline and control which they look back upon with satisfaction and admiration.

NOTE: These bulletins are designed to help disseminate modern pediatrics knowledge to the general medical profession and will appear monthly in Modern Medicine.

*Journal of the American Medical Association, Vol. 149, p. 170, May 10, 1952

This Bulletin Accepted By The Council On Foods And Nutrition Of The American Medical Association



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for safer control of HYPERTENSION

In PERTENAL the potent vasodilator, mannitol hexanitrate, supplements the hypotensive action of veratrum, allowing the veratrum to take effect at a lower blood pressure level . . . assuring well sustained reduction of pressure, with minimal, *safer* veratrum dosage, *and* prompt relief of headache, dizziness, worry, restlessness, insomnia, gastro-intestinal discomforts and other symptoms which often aggravate pressure.

PERTENAL treats the patient as a whole — helps assure
a more comfortable, more tranquil, often longer life.

Dose: 1 tablet every 4 to 6 hours.
Supplied in bottles of 50, 100 and 500 tablets.

each PERTENAL tablet contains:

Veratrum Viride (standardized extract of the whole drug)	100 mg. (1½ gr.)
Homatropine Methylbromide	2.5 mg. (1/25 gr.)
Mannitol Hexanitrate	30 mg. (½ gr.)
Phenobarbital	15 mg. (¼ gr.)

Comprehensive literature and *samples* on request

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Therapeutic Preparations for the Medical Profession

other institutions are supported by private philanthropy or by the taxpayers of the city, county, or state. All are nonprofit institutions.

It should be made clear to your readers that:

1] The Texas Medical Center consists of a 128-acre tract of land on which are located several independently operated institutions.

2] The principal objective of the Texas Medical Center from its inception has been to foster and support the private enterprise system of medical education, research, and service.

3] Mrs. Oveta Culp Hobby resigned her appointment as a member of the Board of Trustees of the Texas Medical Center before your January issue was in circulation.

FREDERICK C. ELLIOTT
Executive Director

Houston

Mathematical Absurdities

TO THE EDITORS: This is a special plea to writers of technical articles to use a bit more intelligence in expressing simple mathematical facts. The literature is literally full of meaningless statements of fact and, in many instances, simple arithmetical errors which at least render the article worthless and in some cases are actually dangerous.

One of the most common forms of vague statement is to the effect that a certain thing renders something "four times *less* frequent." A classic example—which prompts this letter—is a statement by an internationally prominent Canadian pathologist in a book published in 1945. In a section on status lymphaticus he makes this statement: "Adrenalectomy lowers the resistance of rats to morphine four hundred times . . . ." Just what does he mean? What could "lowering . . . four hundred times" mean?

Does he mean that adrenalectomy increases the *susceptibility* of the rat to morphine 400 times? Bearing in mind that doubling a factor is a 100% increase (thus increasing it to 200%), an increase of 400 times is a 40,000% increase. Just what does he mean?

If he means, "Adrenalectomy increases the sensitivity of the rat to morphine by 400 times," he should have so stated the fact or, perhaps, "Adrenalectomy in the rat reduces the LD_{50} of morphine to 1/400 of normal."

Two horrible examples of mathematical absurdities published by persons who no doubt knew better follow.

Not so many years ago a biologist in one of our well-known universities published an article on the effect of copper sulfate on the livers of ducks. The only water available to the ducks was a copper sulfate solution of variable but known concentration. He would keep the ducks on a copper sulfate solution of, for example, 1/100,000 for a certain number of days, then on a slightly more concentrated solution for another period of time, and so on. Then, to determine the average, he set up fractions using the number of days

(Continued on page 165)

ETHICAL

The Stuart Formula is one of the oldest ethically promoted multivitamin products.

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Constant improvements to meet the latest medical demands have kept it one of the finest multivitamin products available.

Doctors throughout the nation report better results with

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TWO TABLETS (average daily dose) standardized to contain:

VITAMINS

A	5,000 USP units
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C	100 mg.
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COMPLETE B COMPLEX

B_1	5 mg.
B_2	5 mg.
Niacin and Niacin Amide	30 mg.
B_6	0.2 mg.
B_{12} (50% USP Crystalline + 50% B_{12} Concentrate)	1 mcg.
Panthenol	4.3 mg.

Also other members of the B Complex from natural sources, yeast and liver fraction 2

MAINTENANCE MINERALS

Iron	15 mg.
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TRACE MINERALS

Cobalt	0.2 mg.
Copper	0.75 mg.
Manganese	1 mg.
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A PLEASANT TASTING MULTIVITAMIN LIQUID
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PLUS MAINTENANCE AMOUNTS OF IRON & IODINE
PLUS LOW COST TO PATIENTS

Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: What could cause puffiness of one instep? This condition has lasted about six months and is painless. The swelling subsides somewhat in the morning. The foot is not flat or indurated.

M.D., Massachusetts

ANSWER: *By Consultant in Orthopedics.* Diagnosis is tenosynovitis of the toe extensor tendons. The condition is stubborn and prolonged. Deep roentgen therapy is sometimes helpful together with ordinary measures, such as reduced activity, loose shoe, and heat.

QUESTION: Should nurses wearing nylon uniforms be excluded from a room in which a patient is receiving oxygen?

M.D., Texas

ANSWER: *By Consultant in Anesthesiology.* A spark may occur if a nurse wearing a nylon uniform touches oxygen equipment. To cause damage, this spark would have to ignite some really inflammable material which would, of course, burn intensely in the presence of oxygen. The only such material likely to be in a patient's room is alcohol. Danger would prevail if a nurse wearing nylon gave an alcohol rub or even used an alcohol sponge to give a hypodermic to a patient receiving oxygen therapy. However, I have never heard of such an accident.

QUESTION: A 61-year-old patient had syringomyelia diagnosed about fifteen years ago and some five years later was given a course of radiotherapy. This treatment seemed to delay the process, but for the last two or three years considerable progress has been noted again, involving chiefly the small muscles of the hands. May radiotherapy be repeated? If so, what are the chances of rearresting the process? Are untoward reactions to be anticipated?

M.D., New York

ANSWER: *By Consultant in Neurology.* Radiotherapy may be repeated, but whether the process will be arrested is impossible to predict. Because of the excellent result before, favorable effects can be expected once again. I know of no untoward reactions.

At present no treatment other than radiotherapy is known for this condition. Occasionally, if the cord is sufficiently enlarged to produce pressure symptoms, surgery can be done and the cord cavity evacuated to relieve the pressure. Such treatment is fairly radical and should not be considered until radiotherapy has been tried and proof of a spinal block established.

"We've just been to the doctor and you may as well be the first to know."

Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEMS: In a suit for damages brought August 29, 1951, a patient claimed that in operating upon her August 31, 1944, defendant surgeon was authorized merely to remove a cyst from an ovary, but that, without her consent, he removed the ovary and tied her fallopian tubes. Another doctor operating in 1951 discovered what had been done. In the meantime plaintiff had not consulted defendant, although he lived but 24 miles away. [1] If defendant operated upon plaintiff beyond the consent given by plaintiff, did he render himself liable in damages as for technical assault and battery? [2] Was the suit barred by lapse of time?

COURT'S ANSWERS: [1] Yes. [2] Yes.

The North Carolina Supreme Court did not dwell upon the first question, because it concluded that the suit was barred because not brought within three years after the operation was performed, if the case was not covered by another North Carolina statute fixing a one-year limit. Had there been evidence to show that defendant had fraudulently concealed the extent of the operation performed, time for commencement of suit might have been postponed until plaintiff discovered what had been done. The court stressed the fact that she had not consulted defendant after the operation nor inquired as to the nature of the same or as to why she could not have children (73 S. E. 2d 320).

PROBLEM: An industrial company's doctor extracted blood for test purposes in connection with a preemployment physical examination. If the doctor negligently manipulated the needle used in extracting the blood, could the company be held liable on a theory that he was not exercising independent medical discretion?

COURT'S ANSWER: Yes.

The decision by the New York Supreme Court, Trial Term, New York County, Part VII, rests upon these facts:

The doctor was not called upon to make any finding or form any opinion, but merely to extract the blood for test purposes. The fact that skill was required made no difference, because an employer is liable for neglect of other skilled employees. The extraction is but one step in a physicial examination which does entail practice of the medical art. However, the practice is not pursued to effect a cure or treatment, but rather to provide information enabling the employer to determine whether the applicant has requisite physical qualifications.

First-aid service rendered by the company's medical department is on a different plane, because then the doctor uses independent judgment in treating the patient (116 N. Y. Supp. 2d 20).

Hydergine®

A Practical
Approach to
the treatment of

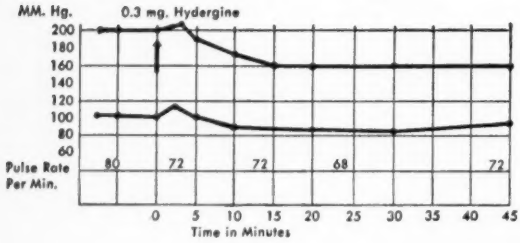
Circulatory

The effect of *Hydergine* in Hypertension

In a preliminary report on the ambulatory treatment of essential hypertension in 22 patients, Grenfell states that following the administration of Hydergine in periods ranging from two weeks to six months: *"The maximum decrease in the systolic blood pressure was 80 mm. mercury, while the maximum decrease in the diastolic blood pressure was 40 mm. mercury. The average systolic blood pressure decrease was 43 mm. mercury and the average diastolic blood pressure decrease was 22 mm. mercury. A decrease in blood pressure occurred in each patient....No serious side effects were noted....This agent provides a safe means of treating essential hypertension. To date, it has proved to be effective where other measures available in the past have proved ineffective."*

Grenfell, R. F.: Am. Pract. & Digest Treat. 4:39 (Jan.) 1953.

ACTION OF HYDERGINE (I.V.) IN A HYPERTENSIVE



It was observed by Rothlin[1] that hydrogenation markedly alters the properties of the natural ergot alkaloid. The *natural* alkaloid is a *vasoconstrictor* — the *hydrogenated* alkaloid is a *vasodilator*, by virtue of the central and peripheral actions. One of the marked benefits is the improvement in cardiac filling which results from the bradycardia produced by Hydergine. The accompanying graph demonstrates both the hypotensive effect and the concomitant slowing in heart rate.[2]

1. Rothlin, E.: Bulletin de l'Academie Suisse des Sciences Medicales, Vol. 2, Fasc. 4, 1946/1947.
2. Duret, R. L.: Acta clin. belg. 6: 86 (March-April) 1951.

Disorders

..*Hydergine* in Peripheral Vascular Disease

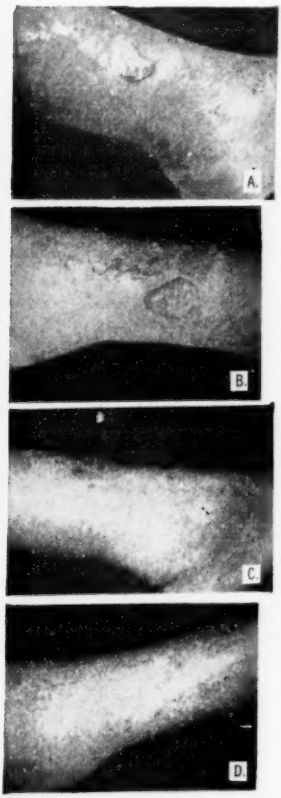
Popkin reports his findings following administration of Hydergine to a *group of 250 patients with peripheral vascular diseases* and obstructive edemas, treated for twelve to twenty-four months, the majority being followed over eighteen months: "Statistically significant improvement was noted in over 60 per cent of the cases followed for approximately 2 years. Organic occlusive arterial diseases showed the greatest improvement. Improvement noted was primarily an increase in surface temperatures in extremities, increased cold protection as manifested by easier and quicker warming of the previously cold extremities which remained warmer longer; increase in walking distance, improvement in healing of ulcers, partial relief of paresthesias, rest pains and nocturnal cramps. Vasospastic disorders were rarely benefited. Edemas, due chiefly to thrombophlebitis, post-traumatic causalgia and venous obstruction were benefited. Phantom limb pain was benefited in one case.

"Toxic or uncomfortable side reactions were rare.

"Dosage required individual attention with increasing and decreasing oral administration combined with parenteral therapy for maximum effectiveness.

"In over 25 per cent of the older age group, CCK 179 [Hydergine], proved to be a non-specific geriatrics drug manifested primarily by an improved sense of well being."

Popkin, R. J.: Angiology *2*: 114 (April) 1951.



A. Arteriosclerotic ulcer before treatment with Hydergine
B. After 10 days of Hydergine therapy
C. After 6 weeks of treatment
D. After 6 months. At 7 months the lesion completely healed.

Roberts, J. E.; Anderson, L. L., and Parry, T. M.: Am. J. M. Sc. *224*: 431 (Oct.) 1952.

continued →

Hydergine

Hydergine consists of equal parts of purified D-H alkaloids as methanesulfonate salts. (1 cc. ampul contains 0.1 mg. of each component.) *Hydrogenation of these alkaloids increases adrenergic blocking action and provides a vasodilator effect.*

Lack of toxicity and wide flexibility of dosage mark Hydergine as unique among many hypotensive agents.

Benefits . . .

In the management of Hypertension

- improved sense of well-being, relief of headache, dizziness, tinnitus, fatigue, etc.
- efficient hypotensive action
- slowed cardiac rate reduces load on heart
- relaxed retinal arteriolar spasm

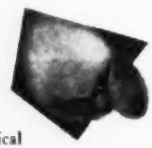
Benefits . . .

In the management of Peripheral Vascular Disease

- relief of pain, increased walking ability, feeling of well-being
- healing of ischemic ulcers
- increase in skin temperature
- less susceptibility to cold
- increased amplitude of pulsation

Dosage Form:

Hydergine is available in 1 cc. ampuls.
For complete information on administration and dosage, write to:



. . . Practical Approach to Vascular Diseases

SANDOZ
Pharmaceuticals

DIVISION OF SANDOZ CHEMICAL WORKS, INC.
68 CHARLTON ST., NEW YORK 14, N. Y.

PROBLEM: A teen-aged girl sustained a foot injury while playing basketball. Her parents declined to consult a doctor, deeming the injury merely a sprain. Two or three days later the girl was visiting in a lawyer's home and he sent her to a doctor for examination. Roentgenograms disclosed a fracture, which the doctor treated without consulting the parents. Were they liable for the doctor's services?

COURT'S ANSWER: No.

In upholding a decision of a lower court, the New Jersey Superior Court, Appellate Division, castigated "financially resourceful fathers" who fail to provide needed medical attention for their minor children. But the court noted that a parent is liable for medical and surgical services only when he has *expressly* or *impliedly* promised to pay. It was reasoned that there was no room for implying a promise to pay in this case, because the parents of the girl had declined to call for medical services (92 Atl. 2d 47).

Possibly, this decision will be approved by the New Jersey Supreme Court if there is further appeal. The facts that the head of the house where the child was visiting took it upon himself to send her to a doctor, knowing that the parents had declined to do so, and that roentgenograms were required to disclose the fracture, tend to diminish ground for any legal implication of authority in the lawyer

(Continued on page 50)

One simple way to promote GOOD NUTRITION

WHENEVER a worried mother asks you how to "make" her baby eat more, you can help her understand that a baby gets full benefit from his food when he *enjoys* it.

No baby can be expected to thrive nutritionally and emotionally if mealtimes are marred by coaxing and conflict.

It is fortunate for your young patients that Beech-Nut Foods combine fine nutritive values with appealing flavor. Now, with more varieties to choose from than ever before, Beech-Nut makes it easier for mothers to please your young patients and *keep* mealtimes happy!

A wide variety for you to recommend: Meat and Vegetable Soups, Vegetables, Fruits, Desserts—*Cooked* Cereal Food, *Strained* Oatmeal and *Cooked* Barley.

Babies love them... thrive on them!

Beech-Nut
FOODS for BABIES

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

Every Beech-Nut Baby Food has been accepted by the Council on Foods and Nutrition of the American Medical Association and so has every statement in *every* Beech-Nut Baby Food advertisement.

more intense, and if self-discipline is not sufficiently rigid, "cheating" results.

Tasti-Diet Low-Calorie Dietetic Foods are especially designed to overcome this problem. Because of their unique processing (without sugar) their caloric content is as much as 70% less.

Tasti-Diet Dietetic Foods—an array of 36 low-calorie fruits, vegetables, salad dressings, puddings, jellies, and gelatin desserts—can make the difference between success and failure in any weight reduction program. Through their use the reducing diet can provide—within the realm of the proper caloric limitation—an abundance of salads with tasty dressings, luscious fruits in a sweet, rich syrup-like liquid, delicious desserts and jellies that satisfy the craving for sweets.

Physicians are invited to send for literature and a representative sample of each category of the foods mentioned.

FLOTILL PRODUCTS, INCORPORATED

TASTI-DIET DIETETIC FOODS DIVISION

Stockton, California

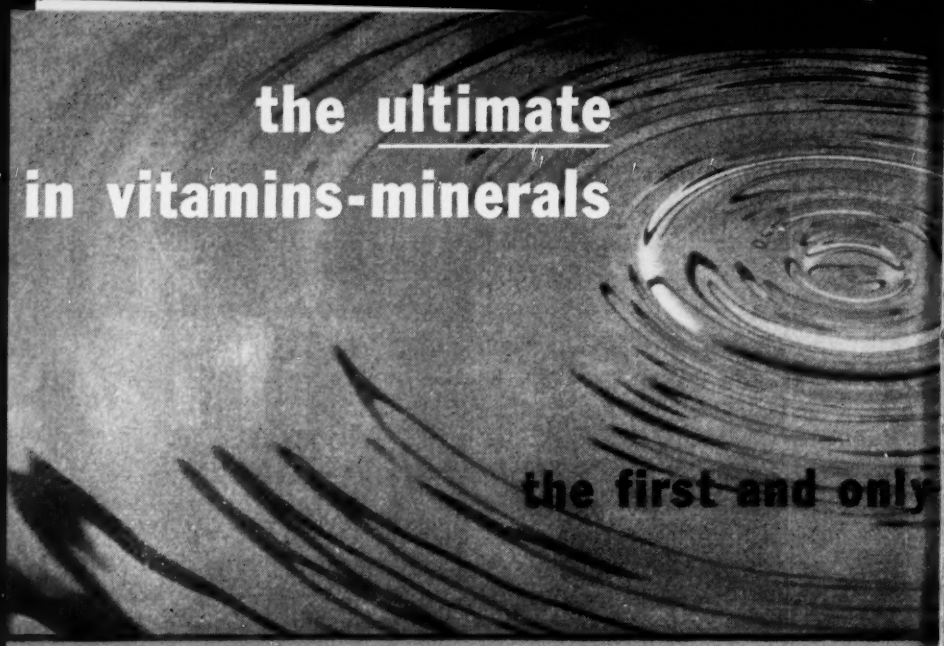
TASTY JELLIES

Tasti-Diet Dietetic Foods are special purpose foods processed to meet specific dietetic needs. Tasti-Diet canned fruits, jellies, and desserts (no sugar added) are sweetened with nonnutritive artificial sweeteners; Tasti-Diet canned vegetables are processed without the addition of salt or sugar; Tasti-Diet dressings, containing no sugar or mineral oil, are prepared especially for low-calorie, low-sugar, and diabetic diets.

DELICIOUS CUSTARDS

GELATIN DESSERTS

TANGY DRESSINGS



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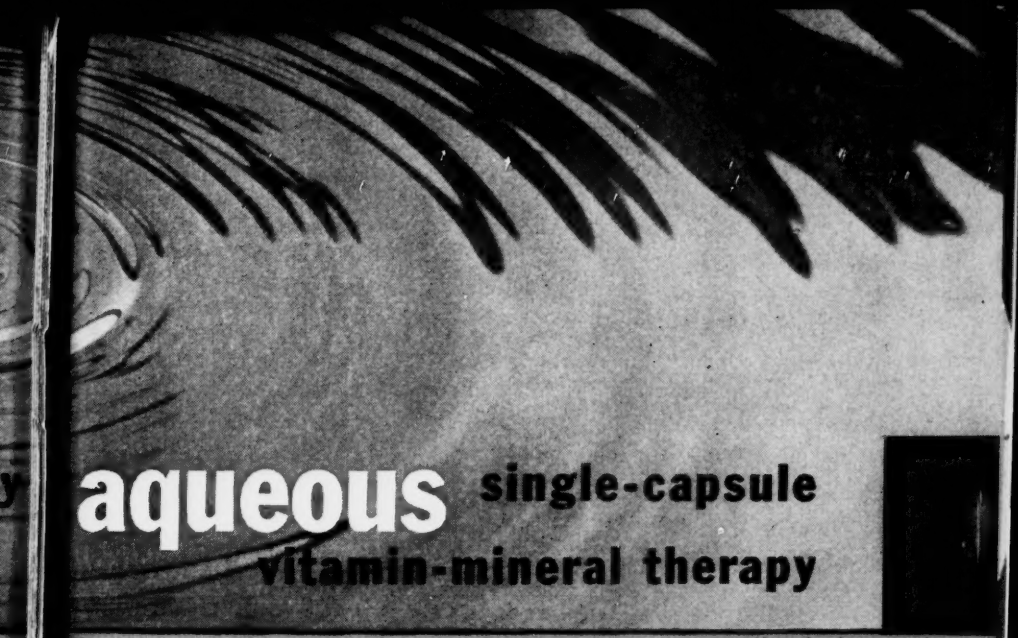
In Vi-Aquamin, yesterday's laboratory dream becomes today's clinical reality... aqueous multivitamins with minerals... in a single capsule. To help keep "well" patients in vigorous health— to help speed recovery in sick, injured and surgical patients—

provides all these advantages...

1. **aqueous—for more rapid, more complete, more assured absorption and utilization of vitamins A, D and E (up to 300% better).**
2. **all essential vitamins with minerals because vitamins alone are not enough.**
3. **no fish oil or taste; allergens removed... nausea, regurgitation, sensitivity reactions virtually eliminated!**
4. **oral convenience with results that approach that of parenteral therapy.**
5. **economy appreciated by the patient.**

Another great nutritional milestone achieved by

samples and literature on new, revolutionary VI-AQUAMIN on request.



aqueous single-capsule vitamin-mineral therapy

the single-capsule vitamin-mineral formula that tops them all in every way.

Just one VI-AQUAMIN capsule provides:

vitamins		minerals	
A* (natural)	5000 U. S. P. Units	Dicalcium Phosphate	700 mg.
D* (calciferol)	800 U. S. P. Units	Calcium / Phosphorus	205 mg. / 160 mg.
Thiamine Mononitrate (B_1)	3 mg.		
Riboflavin (B_2)	3 mg.	Iron	15 mg.
B_{12}-$B_{12}b$**	1 mcg.	Copper	1.5 mg.
Niacinamide	25 mg.	Iodine	0.1 mg.
Pyridoxine HCl (B_6)	0.5 mg.	Manganese	1 mg.
d, Calcium Pantothenate	5 mg.	Magnesium	1 mg.
Ascorbic Acid (C)	50 mg.	Zinc	1 mg.
dl, Alpha-Tocopheryl Acetate* (E)	1 mg.	Cobalt	0.1 mg.

*oil-soluble vitamins made water-soluble with sorethytan esters; protected by U. S. Patent No. 2,417,299.

**as streptomyces fermentation extractives.

U S Vitamin corporation
CASIMIR FUNK LABORATORIES, INC. (affiliate)
250 E. 43rd ST., NEW YORK 17, N.Y.

to pledge the parent's credit in the face of their known unwillingness to engage medical attention.

But the parents' liability presents a close question on which but little light is cast by previous court decisions. The New Jersey decision seems to be inconsistent with one rendered some years ago by the Alabama Court of Appeals in which a father was held liable for treatment of an injury to his teen-aged son in a basketball game, although the youth had accompanied the team without his father's knowledge. The treatment in this case was ordered by the coach (170 So. 95).

¶ The writer doubts that many courts would agree with an intimation in the New Jersey court's opinion that a "financially resourceful father" would not be liable for *emergency* treatment of a child hurried to a doctor's office by a humane passerby after an automobile accident, even if the child's life should be thereby saved. No such emergency was involved in this case. There are numerous judicial precedents to the effect that one may be held liable for emergency medical treatment given when it has been impossible to secure consent. But emergency implies need for immediate attention, which was not true in the New Jersey case.

In the New Jersey case, had it been known that the child's foot was fractured and the father had refused to provide medical or surgical aid, the lawyer should probably have let the parents know that, unless a doctor should be consulted, proceedings would be brought under the New Jersey statutes dealing with neglected children. In such a proceeding, the needed treatment could be secured and the father held liable for the expense, if able to pay. Authority for this view will be found in a decision lately rendered by the Kansas City Court of Appeals, in which needed blood transfusions were provided for an infant over parental objection (252 S. W. 2d 97).

Because it is a potent source of essential erythrocyte maturing factors and also supplies the first-ranking* form of iron, Mol-Iron E.M.F. provides effective therapeutic control of all microcytic and macrocytic anemias amenable to oral therapy.

Potent in All Factors

Each Mol-Iron E.M.F. Capsule contains:

MOL-IRON.....198 mg.
(molybdenized ferrous sulfate)
Vitamin B_{12} Activity Equivalent 10mcg.
(as in Streptomyces fermentation extractives)
Gastric Substance.....250 mg.
Desiccated Liver.....100 mg.
Folic Acid.....0.85 mg.
Ascorbic Acid.....50 mg.

To date 12 reports on Mol-Iron have appeared in medical literature; all point to the conclusion that Mol-Iron is more effective and better tolerated than unmodified ferrous sulfate and other iron salts.

Recommended therapeutic dose: 2 capsules t.i.d.—Bottles of 100 and 1000

WHITE LABORATORIES, INC. • KENILWORTH, N. J.

PROBLEM: A hunter was lost in the mountains in freezing weather and after seven years was presumed dead. Double indemnity was payable under a life policy if he died accidentally and evidence of "contusion" or "wound" was visible on the exterior of the body. It was assumed that he might have been injured in a fall and frozen to death with no external marks other than discoloration of the skin by freezing. Could such discoloration be regarded as a "contusion" or "wound" within the meaning of the policy?

COURT'S ANSWER: No.

So decided the U. S. Court of Appeals, Tenth Circuit, in a suit brought on the policy in Utah, following reasoning in an earlier case in which discoloration caused by sunstroke was declared neither contusion nor wound (151 Fed. 776). The court was influenced by dictionary definitions of a wound as an injury involving breaking of the skin and of a contusion as involving bruise of subcutaneous tissue (199 Fed. 2d 874).

But in an Illinois case decided in 1938, the Court of Appeals, Seventh Circuit, decided that scarlet skin blotches indicating carbon-monoxide poisoning constituted a wound or contusion under a similarly worded life policy (97 Fed. 2d 760).

¶ Law reports disclose so many conflicting decisions on this subject that statement of a general rule applicable throughout the country is impossible.—A.L.H.S.

(Continued on page 218)

Chloral Hydrate

potentiated by *calcium* bromide

Therapeutically effective

FELLO-SED

ELIXIR

FOR PHYSIOLOGICAL SLEEP WITH MINIMAL AFTER EFFECTS

Fello-Sed contains CHLORAL HYDRATE plus CALCIUM bromide and atropine sulfate in stable, therapeutically correct proportions.

Fello-Sed produces a quiet deep sleep, lasting for 5-8 hours — with chloral hydrate's action — potentiated by calcium bromide.

Fello-Sed contains per teaspoonful (4cc):

Chloral Hydrate (7½ grs.)	0.5 Gm.
Calcium Bromide (7½ grs.)	0.5 Gm.
Atropine Sulfate (1/480 gr.)	0.125 mgm.

Dosage: Adult Dose: *As a sedative:* ½ to 1 teaspoonful in milk, water or fruit juice, every 3 or 4 hours or as directed. *As a hypnotic:* 1 to 2 teaspoonfuls or more in milk, water or fruit juice at bedtime, or as directed.

Supplied: Available in 8 fluidounce bottles.

Literature and Samples Upon Request

Fellows Medical Mfg. Co. Inc. Pharmaceuticals

pharmaceuticals since 1866

26 Christopher Street New York 14, New York

Originators of Chloral Hydrate in Soft Gelatin Capsules

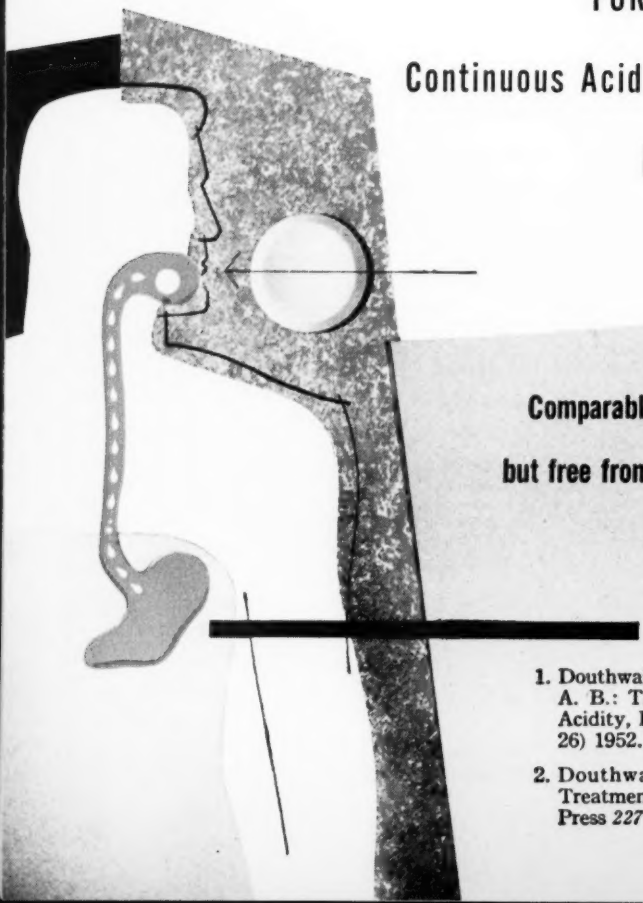
Announcing

Nulacin

FOR

Continuous Acid Neutralization

in Peptic Ulcer



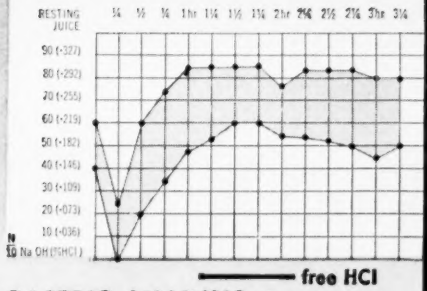
Comparable to Drip Therapy

but free from its inconvenience

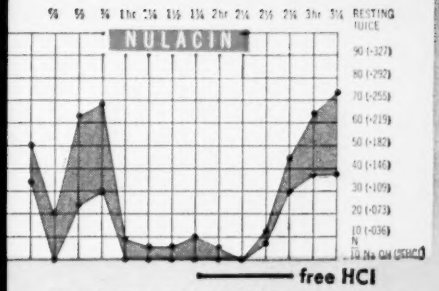
and its difficulties

1. Douthwaite, A. H., and Shaw, A. B.: The Control of Gastric Acidity, Brit. M. J. *2*:180 (July 26) 1952.

2. Douthwaite, A. H.: Medical Treatment of Peptic Ulcer, M. Press *227*:195 (Feb. 27) 1952.



GASTRIC ANALYSIS. Superimposed gruel fractional test-meal curves of five patients with peptic ulcer.



GASTRIC ANALYSIS. Same patients, two days later, showing the neutralizing effect of sucking Nulacin tablets (3 an hour).

Continuous neutralization of the gastric contents, the *sine qua non* of successful peptic ulcer therapy, is conveniently and effectively achieved with Nulacin tablets.

Placed between the gum of the upper jaw and the cheek, and allowed to dissolve, the Nulacin tablet slowly releases its acid-combining ingredients. Thus its maintained antacid effect is comparable to that of continuous intragastric drip, but is entirely free from the disadvantages and inconveniences of the latter.[1]

Highly palatable and providing only 11 calories, each Nulacin tablet is prepared from milk combined with dextrins and maltose and incorporates:

Magnesium trisilicate	3.5 gr.
Magnesium oxide	2.0 gr.
Calcium carbonate	2.0 gr.
Magnesium carbonate	0.5 gr.
Ol. menth. pip.	q.s.

The efficacy of these antacids is enhanced manyfold by the unique method of administration employed in the form of Nulacin.[2]

The Nulacin tablet is lozenge-shaped for convenient retention in the buccal sulcus, and of proper hardness to avoid too rapid disintegration.

For the treatment of active ulcer, the patient should be instructed to suck Nulacin tablets, two or three every hour, beginning one-half to one hour after each meal.

During quiescent periods, the suggested dose is two tablets between meals, beginning half an hour after each meal. The efficacy of the tablet is greatly reduced if it is chewed and swallowed.

Nulacin is available in distinctive prescription label tubes of 25 tablets at all pharmacies.

Horlicks Corporation

Pharmaceutical Division

RACINE, WISCONSIN

Washington LETTER

Health and Welfare Programs under Double Scrutiny

The Republican administration already has under way two "investigations" of health and Social Security programs. One, sponsored by the White House and well financed, is long range in scope and may not show results for a year or more. The other, conceived without advance warning and facing a troubled life, probably will have to do whatever it accomplishes, good or bad, in a few short months.

The first inquiry is a product of the joint planning of President Eisenhower and Sen. Taft. Discussed on Capitol Hill last year, it was assured after the November elections. Then both the President and Sen. Taft said they would see that a commission was set up.

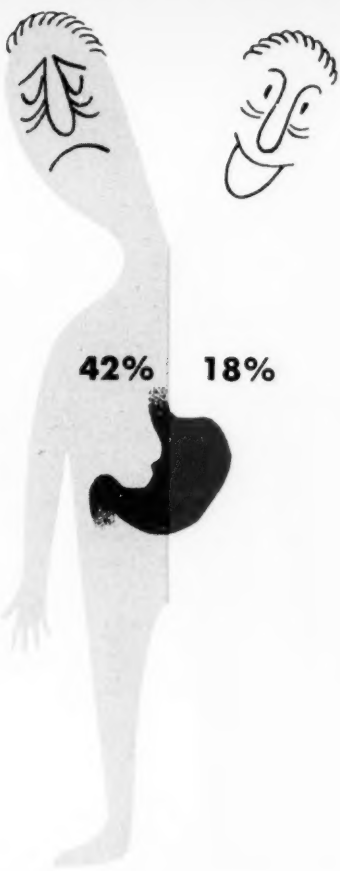
". . . and remember—Finipaire is compounded just like a doctor's prescription!"

Back of this commission is the desire to make a more clean-cut separation of federal and state responsibilities in the fields of social security and health. At the same time, there would be a parallel separation of tax resources, so that states could tax their own people to finance activities now largely financed from Washington.

Involved would be all the categorical programs in the health fields, for which states now receive grants totaling hundreds of millions of dollars each year. Sen. Taft has said that he thinks states should be able to decide their own requirements, for example, in aid for crippled children, and to have a few exclusive taxation fields, such as gasoline or amusements, where the needed money could be raised.

The commission came to life following a White House luncheon, when the President was host to congressional leaders and a group of governors. The commission will be composed of members appointed partly by Senate and House leaders and partly by the White House. It will have enough funds and an adequate staff.

The other investigation is facing in the same direction as the Eisen-



Ulcer recurrence reduced...

standard therapy **42%**

mucin-antacid **18%**

A rate of 42 per cent for standard therapy comes to light in 64 reports[1] covering 13,537 ulcer patients during a fifty year period.

The superiority of mucin-antacid therapy is shown by the comparatively *low recurrence rate of 18 per cent.* This is the figure on 125 patients treated by Hardt and Steigmann.[2]

TRIMUCOLAN, a new mucin-antacid, excels standard therapy because...

1. It relieves pain almost as quickly as soluble alkalis, but without rebound or alkalosis.
2. It coats and clings to ulcer and entire gastric mucosa uniformly.
3. It remains in stomach *longer* — exerts prolonged antacid action.
4. It retards pepsin activity and inhibits mucosal erosion.
5. It reduces the likelihood of ulcer recurrence at least 50 per cent.

TRIMUCOLAN®

IS MUCIN + REACTIVE ALUMINUM HYDROXIDE + MAGNESIUM TRISILICATE

WINTHROP

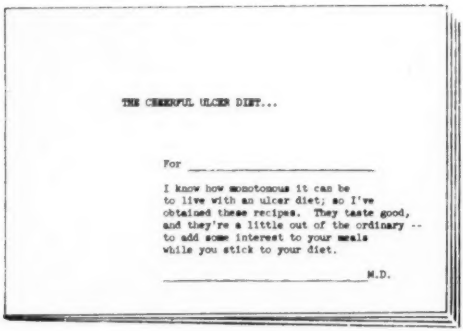
Trimucolan, trademark reg. U. S. Pat. Off.

1. Bralow, S. P., Spellberg, M., Kroll, H., and Necheles, H.: Am. Jour. Digest. Dis., 17:119, Apr., 1950.

2. Hardt, L. L., and Steigmann, Frederick: Am. Jour. Digest. Dis., 17:195, June, 1950.

See helpful offer on reverse side. ▶

Now—relieve the "pain" of monotony in ulcer


THE CHEERFUL ULCER DIET...

For _____

I know how monotonous it can be to live with an ulcer diet; so I've obtained these recipes. They taste good, and they're a little out of the ordinary -- to add some interest to your meals while you stick to your diet.

_____M.D.

You fill in patient's name

. . . and sign your own name.

Give "THE CHEERFUL ULCER DIET"

26 recipes to excite the patient's interest without exciting his ulcer.

Restore to ulcer patients the pleasure of eating with these recipes. Relieve ulcer pain and symptoms with

TRIMUCOLAN

a new mucin-antacid

Send for "THE CHEERFUL ULCER DIET".

Let patients enjoy these tempting, digestible dishes *soon*. The booklet carries the authority of your signature on the cover. Mail the coupon now!

TO: Winthrop-Stearns Inc., 1450 Broadway, New York 18, N. Y.

Please send a copy of "The Cheerful Ulcer Diet"—a practical 16 page booklet offering 26 delicious recipes. Specially prepared under expert supervision to enliven the maintenance ulcer diet.

NAME.....M.D.

STREET.....

CITY.....ZONE.....STATE.....

779 M

hower commission—but there isn't much more similarity.

Guided by a subcommittee of the House Ways and Means Committee, the investigation was initiated under unusual circumstances that have nothing in particular to do with Social Security or medicine.

Well before the administration made clear its opposition to immediate tax reduction, Chairman Dan Reed of the Ways and Means Committee introduced a bill for income tax cuts. Whenever the opportunity appeared, Rep. Reed proclaimed that this Congress would cut taxes.

With the overwhelming support of his committee, Rep. Reed had his bill reported favorably to the Rules Committee, which must clear legislation before it reaches the House floor. And Rep. Reed continued to announce that there would be a tax cut.

Meanwhile, word came from the White House that [1] no tax cut at all was probable until at least January 1, 1954, and [2] some sort of Social Security extension was expected this session.

Then Rep. Reed acted. He appointed a subcommittee to make a thorough investigation of Social Security, including health legislation. Only emergency legislation could be expected in these fields, he said, until the subcommittee had made a complete report with recommendations.

Chairman of the subcommittee is Rep. Carl T. Curtis (R., Neb.), who has a reputation for not liking anything about Social Security, even the laws now on the books. It would be surprising, indeed, if he could discover anything new and praiseworthy to recommend.

However, if and when the subcommittee meets, its sessions should not be dull. One of the Democratic members is Rep. John D. Dingell, a sharp-tongued old gentleman from Michigan who is noted primarily for his relentless sponsorship of national compulsory health insurance—the Murray-Dingell bill.

There is, of course, talk of compromise, of allowing Rep. Reed to put through a token tax cut and of allowing the administration a token extension of Social Security coverage. One possibility is enactment of the "waiver of premium" provision, tentatively approved by the last Congress despite strong opposition from American Medical Association. This would preserve OASI pension levels for persons permanently and totally disabled. AMA thought it gave the federal government too much authority in the medical determination of disability.

The result may be a test of strength between Rep. Reed and the President. As head of the committee which normally has to approve any taxation or Social Security bills, Rep. Reed is in a position to make trouble if a trade can't be arranged.

Private Contract Physicians

Before the start of hearings on extension of the doctor draft law, the military services began to tighten up their use of uniformed doctors.

One improvement came in orders going out from Washington for greater use of private contract physicians in the big Army and Navy hospitals. This follows a suggestion made by AMA several

(Continued on page 62)

*in musculoskeletal pain

dosage for

APAMIDE or APROMAL:

Adults—1 tablet every 4 hours,
or as required for individual patient.
Children over 5—½ tablet every 4 hours.
Bottles of 100.

pain relief

that is prompt... prolonged... prescribed

APAMIDE

TRADEMARK

tablets

(N-acetyl-p-aminophenol, AMES, 0.3 Gm.)

analgesic · antipyretic

APAMIDE relieves pain promptly, because its direct action avoids analgesic lag. The margin of safety and outstanding tolerance recommend *Apamide* for respiratory infections, functional headache, muscular or joint pain and dysmenorrhea.

pain relief *plus* sedation

APROMAL

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tablets

(N-acetyl-p-aminophenol and acetylcarbromal, AMES, 0.15 Gm. each)

sedative · analgesic · antipyretic

non-narcotic and *non-barbiturate*

Prescribed for nervous or apprehensive patients and pre- and postoperatively in minor surgery and painful procedures.

Apamide and *Apromal* are trademarks of Ames Company, Inc.

℞ ONLY... *Apamide* and *Apromal* are *prescription-protected* to prevent indiscriminate use. *You* control dosage and duration of treatment.

Literature and samples available upon request.

AMES

COMPANY, INC., ELKHART, INDIANA

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months ago, but until now not put into effect by the services. For each contract doctor, one more physician will be able to stay in private practice rather than go into uniform.

There is talk, too, of lowering the ratio of doctors in the armed forces from 3.7 to 3 per 1,000 by early fall.

As if to underscore this attempt to economize on military doctors, President Eisenhower announced that the services had decided to reduce their calls for April, May, and June from 1,800 to 1,200. This figure actually is 20% lower than the calls for the first quarter, January through March.

The President credited reductions to recommendations of the Rusk Committee, which surveys civilian as well as military health needs, but whose advice is not always accepted by the military. The supposition is that the White House passed on the word that this time it was backing the Rusk recommendations.

"I got in the way of a guided muscle!"

Washington Notes

¶ In 1952 the average city family spent 4.7% of its budget on medical care, according to a survey by Bureau of Labor Statistics. A little more than twice as much was spent for clothing and 7 times as much for both food and housing. Future cost-of-living variations will be measured from the 4.7% figure under the new BLS formula.

¶ If various investigations don't interfere, Congress might take interest in the new bill for aid to local public health departments. It has high level sponsors from both parties, including Knowland and Kefauver. Similar legislation passed the Senate two years ago, but was pigeonholed in the House.

¶ Another bill likely to be passed, regardless of investigations, would give the federal government the power to forcibly retain narcotic addicts convicted in state courts un-

(Continued on page 69)

"Well, the hospitalization plan has been in effect 30 days today."

oral diuretic without equal

"...superior...in promoting sodium and water excretion."[1]

"...three-fourths the diuretic action of the standard [meralluride by injection]..."[2]

"...a valuable substance to replace parenteral diuretics in patients who require continuous diuretic medication."[3]

NEOHYDRIN®

THE DIURETIC TABLETS THAT WORK

LIKE AN INJECTION

1. Moyer, J. H., and Handley, C. A.: Federation Proc. *11*:378, 1952.
2. Greiner, T.; Gold, H.; Warshaw, L.; Palumbo, F.; Weaver, J.; Mathes, S., and Marsh, R.: Federation Proc. *11*:352, 1952.
3. Goldman, B. R., and Steigmann, F.: J. Lab. & Clin. Med. *40*:803, 1952.

how to use this new drug

Maintenance of the edema-free state has been accomplished with as little as one or two NEOHYDRIN Tablets a day. Often this dosage of NEOHYDRIN will obtain per week an effect comparable to a weekly injection of MERCUHYDRIN.® When more intensive therapy is required one or two tablets three times daily may be prescribed as determined by the physician.

Gradual attainment of *intensive therapy* is recommended to preclude gastrointestinal upset which may occur in occasional patients with immediate high dosage. In rare instances a sensitivity to NEOHYDRIN may arise. Though sustained, the onset of NEOHYDRIN diuresis is gradual. Injections of MERCUHYDRIN will be initially necessary in acute severe decompensation.

Contraindicated in acute nephritis and nephrosclerosis.

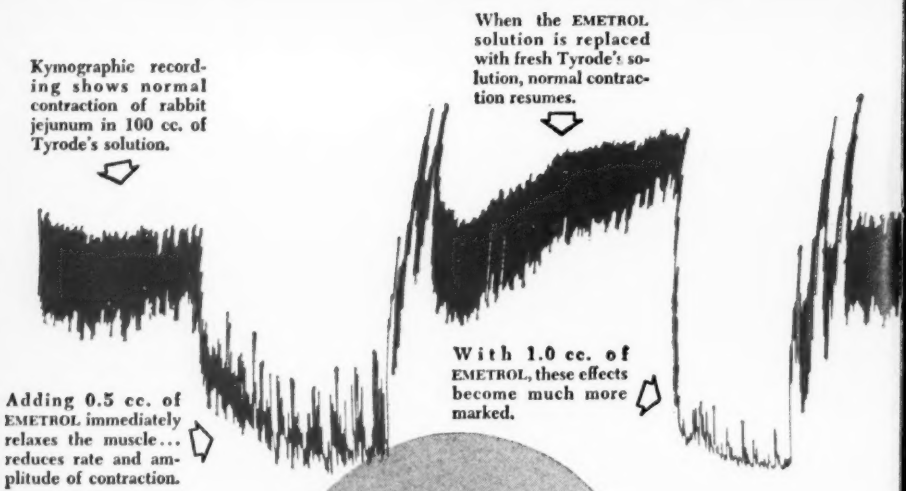
Any patient receiving a diuretic should ingest daily a glass of orange juice or other supplementary source of potassium. Any patient receiving a diuretic should be watched for signs of depletion in sodium and chlorides especially in hot weather. Such depletion may first manifest itself as a refractivity to the diuretic and can be corrected by ingestion of sodium chloride.

packaging

Bottles of 50 tablets. There are 18.3 mg. of 3-chloromercuri-2-methoxy-propylurea in each tablet.

Leaders in diuretic research

..., MILWAUKEE 1, WISCONSIN



this is why EMETROL® controls

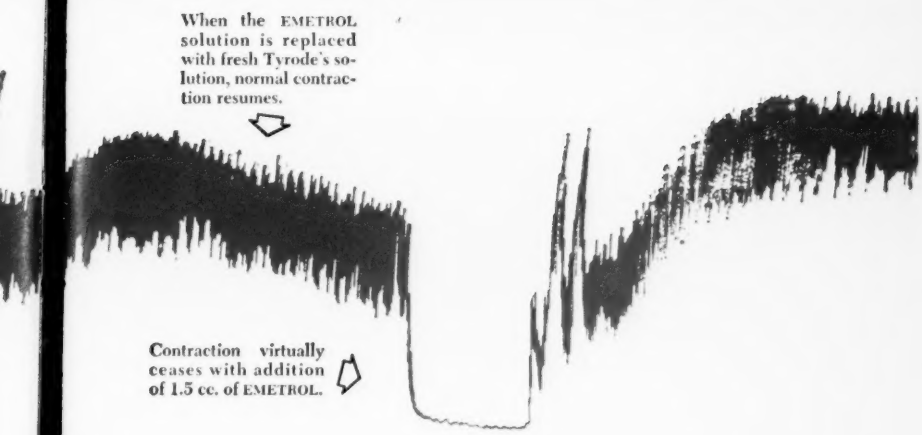
(PHOSPHORATED CARBOHYDRATE SOLUTION)

EMETROL Phosphorated Carbohydrate Solution permits effective physiologic control of functional nausea and vomiting—without recourse to antihistaminics, sedatives, or hypnotic drugs.

Pleasantly mint flavored, EMETROL provides balanced amounts of levulose and dextrose in coacting association with orthophosphoric acid, stabilized at an optimal, physio-

Kinney®

SAMPLE AND LITERATURE



epidemic vomiting physiologically

logically adjusted pH level.

Thus, EMETROL can be given *safely* —by teaspoonfuls for children, tablespoonfuls for adults—at *repeated* intervals until vomiting ceases.

IMPORTANT: EMETROL is always given *undiluted*. No fluids of any kind should be taken *for at least 15 minutes after taking* EMETROL.

INDICATIONS: Nausea and vomiting resulting from functional disturbances, acute infectious gastroenteritis or intestinal "flu," pregnancy, motion sickness, and administration of drugs or anesthesia.

SUPPLIED: Bottles of 3 fl.oz. and 16 fl.oz., at all pharmacies.

KINNEY & COMPANY
COLUMBUS, INDIANA

TO PHYSICIANS ON REQUEST

"Appestat Malfunction" is newest term for cause of Bulimia (Hyperorexia)

Development of atheromatous plaques is invariably accelerated in obese patients. These scarred aortas are from patients who succumbed (lower) at age 54, height 5'6", weight 210 lbs., and (upper) age 44, height 5' 5", weight 230 lbs.

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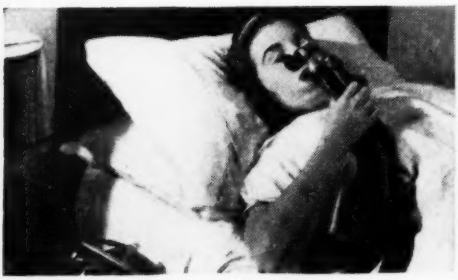
SHARP & DOHME

TABLETS PHENYLPROPANOLAMINE HCl, THYROID AND VINBARBITAL



Since errors in excess of 25% will occur in estimating daily calorie expenditure if B.M.R. is not known, determination of a safe and effective reducing diet remains the physician's responsibility.

Exercise is of little help. To burn up a single pound of excess fat it would probably be necessary to walk at least from Philadelphia to Trenton[2]—and possibly all the way to New York.[3]

SHARP & DOHME, Philadelphia 1, Pa.

til their hospital treatment is completed. Now federal prisoners may be kept against their will, but those committed through state courts can't be retained in special hospitals involuntarily.

¶ In the opinion of the Budget Bureau, Veterans Administration wouldn't be in financial trouble now if it had made an honest effort to hold down its operations at the time last year's appropriations bill was passed. The extra money VA asked this spring, but didn't get, would have brought the home town service program up to last year's level.

¶ Two new pieces of legislation would go far toward increasing the number of physicians. One proposes a federal grants-and-scholarships program that would see students through eight years of higher education, medical colleges included. The other would set up a federal medical-dental school, whose graduates would have to pledge a certain number of years to government service.

"You will find that payment of your bill will greatly revive my interest in your hemorrhoids."

Life's Weary Moments

Think of a gag that fits the illustration. For every issue a new gag is published and the author sent $5. The Apr. 15 winner is

R. H. Sundberg, M.D.
San Diego, Calif.

Mail your caption to The Cartoon Editor Caption Contest No. 1 MODERN MEDICINE 84 South 10th St. Minneapolis 3, Minn.

QUICK, SUSTAINED RELIEF FOR

Post-Hemorrhoidectomies
Post-Episiotomies
Pruritus-Eczemas
Burns—Cuts—Bruises
Exanthemas
Insect Bites—Etc.

In 1 oz. tubes and 1 lb. jars

New POTENT RELIEF from DISCOMFORT OF HEMORRHOIDS

Medical literature [1, 2] continues to confirm the exceptional effectiveness of Americaine Topical Anesthetic Ointment for quick, sustained relief of surface pain and itching. In a recent report of relief from hemorrhoid distress in the parturient, Americaine provided complete relief in 100% of cases in an average of 10 minutes, and sustained relief for an average of 6 hours.[1] For the first time, Americaine makes possible the high concentration of 20% dissolved benzocaine for more potent, less toxic relief.

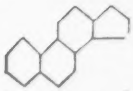
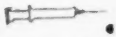
1. *Schmitz, H. E., Smith, C. J., and Carberry, G. A.: West. Jl. Surg., Ob., and Gyne., 59:117 (Mar. 1951).*
2. *Horwitz, B.: Am. Jl. Surg., 18:81 (Jan. 1951).*

Send for Samples and Literature

ARNAR-STONE LABORATORIES, INC.
(Formerly Named Americaine, Inc.) EVANSTON, ILL.

Americaine
TOPICAL ANESTHETIC OINTMENT

cortisone + SCHERING = Cortogen

The symbol SCHERING denotes leadership in steroid hormone  research and manufacture -- including Cortogen in the most useful clinical forms. For systemic therapy, use Cortogen tablets SCHERING or injection  . For eye  disorders use Cortogen ophthalmic suspension -- <u>sterile</u>  . The Schering seal SCHERING appears on each tablet and package -- your assurance of quality.

CORTOGEN®

Acetate (cortisone acetate, Schering) Tablets, 5 mg. and 25 mg.;
Injection, 25 mg. per cc., 10 cc. multiple-dose vials;
Ophthalmic Suspension—*Sterile*, 0.5% and 2.5%, 5 cc. dropper bottles.

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CORTOGEN

SCHERING

Use and prescribe the **NEW** Johnson's **ELASTIC BANDAGE** (Rubber Reinforced)

THE lively rubber threads of this cool, lightweight bandage provide the optimum amount of support with a lesser degree of tension than is normally required.

Available in 2", 2½", 3" and 4" widths. All 5½ yds. long when stretched.

Compare its elasticity, strength, weight and contour conformity with the elastic bandage you are now using. Women, especially, will like its *natural* flesh color.

Made by Johnson & Johnson—the most trusted name in Surgical Dressings for over 66 years.

Johnson's Elastic Bandage—Rubber Reinforced—may be applied with confidence whenever the use of an elastic bandage is indicated. Available at drugstores everywhere.

Johnson & Johnson

New...

Myopone Rectal Suppositories

A new approach in the treatment of anorectal complaints

description...

Myopone Rectal Suppositories contain a special solvent-extracted wheat germ oil rich in vitamin E, with *alpha* tocopherol, in a bland, watermiscible base. Contains no cocoa butter, narcotics or local anesthetics.

action...

Promotes healing by its metabolic effect upon injured tissue. Used in the anus or in anorectal and adjacent areas it reduces swelling, relieves tension, spasm, pain.

indications...

- Hemorrhoids — internal and external
- Rectal spasms
- Anorectal discomforts
- Relieves painful anal strictures
- Anal fissures
- Drug pruritus (due to antibiotics)

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Top Flight Model

Dietary Dub

SHE'S a model of perfection—in everything except her diet. Often too busy to eat, she relies on snacks and coffee to keep going from morning until night. At this pace, she'll soon be posing as a subclinical vitamin deficient.

To bring her back to vitamin balance, she may need a corrected diet—*plus* an effective vitamin supplement such as SUR-BEX WITH VITAMIN C.

In addition to providing six important B vitamins (including B_{12}), each SUR-BEX WITH VITAMIN C tablet supplies 150 mg. ascorbic acid—five times the minimum daily requirement. One easy-to-swallow tablet is the prophylactic dose. Two or more for severe deficiencies. In bottles of 100, 500 and 1000.

Each Sur-bex with Vitamin C tablet contains:

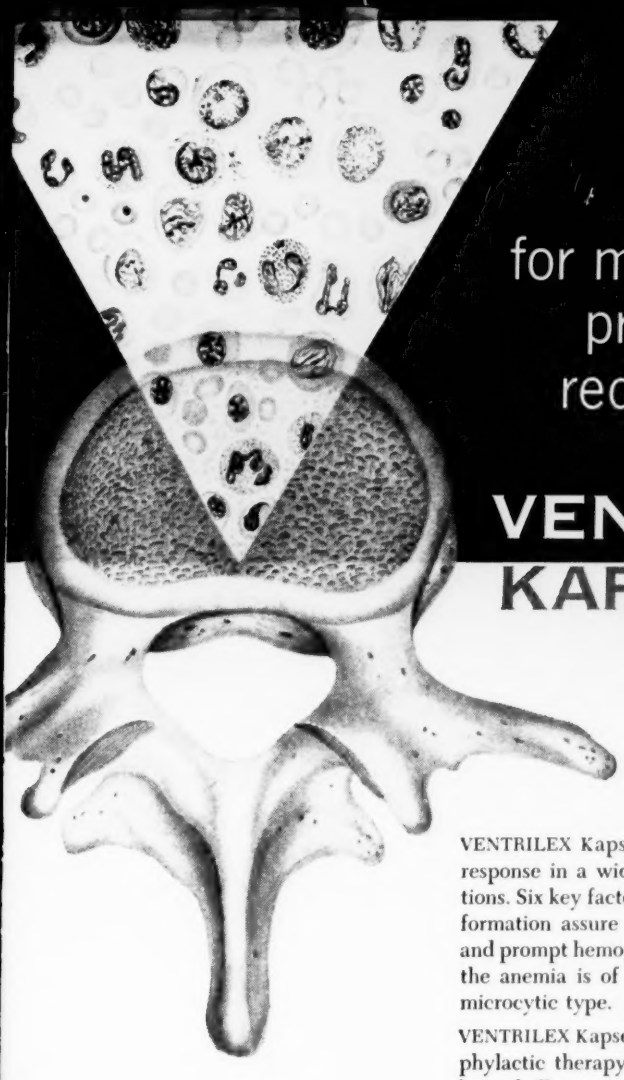
Thiamine Mononitrate	6 mg.
Riboflavin	6 mg.
Nicotinamide	30 mg.
Pyridoxine Hydrochloride	1 mg.
➡ Vitamin B_{12} (as vitamin B_{12} concentrate)	2 mcg.
Pantothenic Acid (as calcium pantothenate)	10 mg.
➡ Ascorbic Acid	150 mg.
Liver Fraction 2, N.F.	0.3 Gm. (5 grs.)
Brewer's Yeast, Dried	0.15 Gm. (2½ grs.)

Sur-bex®

with VITAMIN C

(Abbott's Vitamin B Complex with Ascorbic Acid)

1-63



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comprehensive blood therapy

VENTRILEX Kapseals provide rapid clinical response in a wide variety of anemic conditions. Six key factors essential to normal blood formation assure rapid reticulocyte response and prompt hemoglobin regeneration whether the anemia is of macrocytic, normocytic, or microcytic type.

VENTRILEX Kapseals are also valuable as prophylactic therapy during pregnancy, in prolonged illness, in convalescence, and in the clinical management of geriatric patients.

each VENTRILEX Kapseal contains:

Crystalline Vitamin B_{12}	20 micrograms
Liver Concentrate	0.1 Gm.
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Concentrated Extract of Stomach	0.3 Gm.
Folic Acid	2.0 mg.
Vitamin C	50.0 mg.

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MODERN MEDICINE
THE JOURNAL OF DIAGNOSIS AND TREATMENT

Irradiation
after breast cancer

A Modern Medicine Editorial

After I commented on Dr. Stuart Harrington's statistics, which failed to show that irradiation after the removal of cancer of the breast increases the number of five-year cures, several able roentgenologists wrote to chide me a bit.

Some felt that *preoperative* irradiation would have helped more, while others wondered if, at the Mayo Clinic, the roentgenologists had always given as large a dose of irradiation as the patient's skin would stand. Others would not deny a woman any treatment that might add to her chances of recovery.

My answer was that I am not qualified by special training to enter into the controversy. All I know is that Harrington and Berkson's analysis of thousands of data is the best and most satisfying that I have seen. It would seem now that all that can be done by those who cannot accept the validity of these statistics is to prove that definite results can be obtained with a dosage of irradiation larger than that given at the Mayo Clinic.

Obviously, irradiation must always have a placebo value, and we physicians know that in many cases, if we are to avoid serious criticism, we must prescribe it. But we would all like to know whether what we prescribe is or is not a placebo.

The suggestion that irradiation for breast cancer is a placebo may be a bitter thing for some roentgenologists to face, but I don't see why it should be. I can remember when my friends the gastroenterologists had to face the unpleasant fact that their "cures" of peptic ulcer were seldom permanent. Some for a time resented the fact, but eventually they all accepted it.

WALTER C. ALVAREZ

Reduction of the arterial pressure may reverse malignant hypertension to the benign phase.

Malignant Hypertension

G. W. PICKERING, M.B.
St. Mary's Hospital, London

THE two types of retinitis occurring in hypertension are the albuminuric form associated with malignant hypertension and the arteriosclerotic retinitis which has a much more favorable prognosis.

Albuminuric retinitis, or hypertensive neuroretinopathy, is bilateral and characterized by papilledema, retinal edema, large ill-defined exudates, hemorrhages, and a macular star figure. Arteriosclerotic retinitis, or arteriosclerotic retinopathy, is usually unilateral, without disk or retinal edema, and with small and sharply defined exudates. A star figure does not occur or consists of discrete dots rather than of sheets or lines of exudate. Thrombosis of retinal veins may modify the manifestations.

The distinguishing feature of albuminuric retinitis is widespread neuroretinal edema from increased intracranial pressure produced by the high diastolic arterial pressure. Focal retinal lesions such as hemorrhages and exudates probably are caused by focal vascular obstruction, either arterial, from organic or spastic occlusion, or venous. Venous occlusion also produces exudates and hemorrhage in the affected region.

A close correlation exists between the level of cerebrospinal fluid pressures and the coexistent retinal lesions. G. W. Pickering, M.B., observed that 12 patients with cerebrospinal fluid pressure above 250 mm. of water had, or subsequently had, albuminuric retinitis. Of 21 patients with pressures below that level, 1 had albuminuric retinitis, 8 arteriosclerotic retinitis, and the others no retinal lesions other than arteriosclerosis.

Hypertension can be reversed from malignant to benign by measures that reduce the arterial pressure. Diagnosis of the malignant phase therefore carries the urgent therapeutic implication to lower the arterial pressure promptly and persistently. Examples of successful treatment include 3 cases of pyelonephritis, 1 unilateral and 2 bilateral.

All 3 patients had albuminuric retinitis with bilateral papilledema, large ill-defined exudates, and star figures. Renal and adrenal arteriolar necroses were found in tissue obtained at surgery.

Hypertension of a 33-year-old man was reduced from an average of 230/160 to 150/110 over a period of six years by removal of the diseased kidney, the adrenal, splanchnic nerves, and lumbar gan-

The pathogenesis of malignant hypertension. Circulation 6:599-612, 1952.

glia on the same side. Retinitis cleared quickly and renal function is normal six years later.

In the second case, a girl of 13 years, removal of the more diseased kidney slightly decreased the blood pressure, and excision of one adrenal and 75% of the other produced a further drop not fully maintained. Six years later some hypertension and gross organic changes in retinal arteries persist with normal retinal function.

In the third case, a girl aged 11, bilateral splanchnic section and excision of ⅞ of the adrenal tissue produced a maintained reduction from 250/175 to 150/110. Five years later the patient has slight hypertension and normal fundi and retinal function.

Survival for six years with no retinitis or urea retention seems clear evidence that the malignant course of the hypertension was altered to the benign in these cases.

The Flagellate Diarrheas

B. H. KEAN, M.D.

SEVERE diarrhea may be caused by 2 of the 5 flagellates occasionally found in the intestinal tract of man, *Giardia lamblia* and *Trichomonas hominis.*

Though formerly regarded as nonpathogens, the parasites must be considered in the differential diagnosis of intestinal disorders, states B. H. Kean, M.D., of Cornell University, New York City. Apparently both are acquired by ingestion of contaminated food or water. Diagnosis is established by examination of the stool.

In the United States, *G. lamblia* occurs in 5 to 15% of the population, being twice as common in children as in adults. Symptoms of giardiasis vary from slight dyspepsia, sense of flatulence, and abdominal discomfort to mucous colitis. Stools may be bulky, pale, and mucoid.

Quinacrine hydrochloride is effective in almost 90% of cases. For adults, 0.5 gm. should be given orally in divided doses the first day, then 0.3 gm. for the next six days. Children under 5 years tolerate 100 mg. in divided doses daily for seven days. Children of 5 to 10 years receive 200 mg. daily, and those of 10 to 15 years, 300 mg. daily.

About 1% of the population harbors *T. hominis.* Intestinal trichomoniasis is more intractable than giardiasis but is generally corrected by carbarsone. A dose of 0.25 gm. three times daily for ten days is usually effective, although re-treatment may be necessary. Not infrequently stools clear spontaneously.

The flagellate diarrheas. New York State J. Med. 52:2655-2657, 1952.

Management of cor pulmonale depends on severity of the condition, associated disease, and cyanosis.

Chronic Cor Pulmonale Without Hypoxia

LEWIS DEXTER, M.D., BENJAMIN M. LEWIS, M.D., FLORENCE W. HAYNES, PH.D., RICHARD GORLIN, M.D., AND HECTOR E. J. HOUSSAY, M.D.
Harvard University, Boston

PHYSIOLOGICALLY, cor pulmonale may be defined as increased resistance to blood flow through precapillary vessels of the lung.

Causes are of 4 major types: [1] emphysematous or other diffuse disease of lung parenchyma, [2] diffuse involvement of pulmonary vessels, such as arteritis, [3] large left-to-right shunts, for example, atrial septal defect, and [4] heart lesions on the left, especially mitral stenosis. Occasionally no lesion is found even after death.

Main features of 17 cases are summarized by Lewis Dexter, M.D., Benjamin M. Lewis, M.D., Florence W. Haynes, Ph.D., Richard Gorlin, M.D., and Hector E. J. Houssay, M.D.

Regardless of the basic disease, changes are the same: decrease of cardiac output, pulmonary arterial hypertension, right ventricular hypertrophy, and, occasionally, right ventricular failure.

Specific symptoms are fatigue and venous congestion, but most symptoms stem from related disorders.

Treatment and prognosis depend on the degrees of cor pulmonale and of associated disease. Great improvement is seldom anticipated, and if cyanosis abruptly develops, the outlook is poor.

Pulmonary derangement can affect the heart in 2 ways: [1] by increasing resistance to blood flow through the lung circuit or [2] by reducing arterial oxygen saturation, thus causing cyanosis. Cor pulmonale and hypoxemia may coexist but should be analyzed separately.

Acute cor pulmonale is produced by pulmonary embolism, and a subacute form by miliary carcinomatosis. Chronic involvement starts insidiously.

Diffuse parenchymal factors include all types of emphysema, whether caused by asthma, old age, kyphoscoliosis, or other conditions. Fibrotic and granulomatous processes such as tuberculosis, silicosis, or Hamman's disease may be responsible.

Diffuse vascular factors encountered are recurrent pulmonary embolism, thrombosis, sickle-cell anemia, which is also a source of thrombosis, schistosomiasis, thromboangiitis obliterans, and other kinds of arteritis.

Left-to-right shunts may result

Chronic cor pulmonale without hypoxia. Bull. New England M. Center 14:69-80, 1952.

from atrial or ventricular septal defects or patent ductus arteriosus. With these lesions cor pulmonale is a major cause of death, but resistance to blood flow usually does not develop until after the age of 20 or 30 years.

Of *cardiac lesions on the left*, mitral stenosis may induce extreme resistance, and left ventricular failure may produce moderate degrees of hypertension.

Little is known concerning the pathogenesis of cor pulmonale. Pulmonary resistance may be heightened by reflex vasoconstriction, organic narrowing of pulmonary arterioles, or mechanical plugging.

Blood flow through the lungs is obstructed in small arteries and arterioles proximal to the pulmonary capillary bed, as if this segment of circulation were partly clamped off. Response in the body is the same as to other obstructive elements.

Blood pressure rises proximally to the lesions, and the amount of blood going through resistance falls. Low oxygen tension in tissue causes muscular fatigue. Dyspnea, though usually related to the underlying lung disease, may result solely from high pressure and resistance in the pulmonary circuit.

Effects on the right ventricle depend on the rapidity with which resistance develops. Acute embolism quickens the pulse, dilates the ventricle, and may cause right-sided failure; in more chronic states, the ventricle may hypertrophy without failure. Between extremes, changes develop in various degrees and combinations.

Arterial oxygen saturation in the cases reviewed was above 85%, cardiac output rather low, pulmonary arterial pressure elevated, but the capillary pressure normal. Pulmonary arteriolar resistance and total pulmonary resistance were elevated. Right ventricular diastolic filling pressure at rest varied considerably.

The cardiac catheter is the most accurate means of diagnosing cor pulmonale. The next best method is roentgenography of the enlarged pulmonary artery, although visualization is not always possible. Electrocardiography is helpful only in advanced stages, with ventricular hypertrophy.

Cor pulmonale should be prevented when possible. Chronic pulmonary infection and asthma may be reduced by antibiotics, antihistaminics, bronchodilators, expectorants, postural drainage, respiratory exercise and training, or surgical measures.

Emphysema may be relieved by pneumoperitoneum. Silicosis, beryllosis, and similar industrial hazards should be avoided by proper ventilation and masks.

Treatment should be focused on relaxation or unplugging of small pulmonary arteries and arterioles. Diffuse vascular diseases are largely thrombotic or proliferative and may require anticoagulants, ACTH or cortisone for arteritis, or specific measures, for instance with schistosomiasis.

Surgery of congenital heart lesions and mitral stenosis may prevent or reduce hypertension. Digitalis and a restricted salt diet are sometimes beneficial.

A system of classification more simple and logical than now exists for severe chest disorders is desirable.

Acute Chest Diseases

JOHN FRY, M.B.
London

SUDDEN severe chest disease producing definite signs of respiratory tract involvement is frequently seen in general practice. In describing 164 patients with such disorders, John Fry, M.B., divides the cases into acute bronchitis, pneumonia, acute pleurisy, severe asthma, and spontaneous pneumothorax.

Acute bronchitis is a moderately severe chest illness of sudden onset and varying constitutional upset, with bilateral and diffuse signs of involvement of the respiratory tract. The whole middle respiratory tract of both lungs is more or less affected.

The illness may occur without recognized previous chest disease or may complicate some active or latent chest condition and probably arises when defense mechanisms of the respiratory tract have been rendered ineffectual by either a preceding disease, such as chronic bronchitis, or an upper respiratory tract infection.

The organisms detected in the sputum are nonspecific, usually consisting of the ordinary inhabitants of the respiratory tract. Most attacks in England appear in the winter or spring.

Primary acute bronchitis tends to occur in younger patients than does the true secondary type. The onset of the illness is more often sudden with the primary form, and rapid progression may ensue, particularly among infants.

A dry, irritating, and distressing cough becomes productive after a few days. Retrosternal discomfort and dyspnea are frequent. The pulse is rapid, and the temperature varies from 99 to 104° F. The respiratory rate is usually increased. Diminished chest movement, normal resonance, and numerous bilateral and widespread rhonchi are noted by chest examination.

Treatment by parenteral procaine penicillin, 700,000 units daily in single doses for adults, and adequate sedation, with antispasmodics when bronchospasm is pronounced, is usually satisfactory.

Pneumonia is an acute illness with demonstrable signs of involvement of the lung tissues. Classical pneumonia, with severe constitutional disturbance and lobar consolidation, is now relatively rare. When the condition is caused by a sensitive organism, response to penicillin is usually rapid and complete.

More commonly encountered is pneumonia characterized by sudden onset of a distressing cough

The acute chest in general practice. Brit. M. J. 4801:68-71, 1953.

with little real constitutional upset in an apparently healthy person. Diminished air entry is noted by auscultation and a shower of râles at the end of inspiration. When a virus is the causative agent, the sputum may be mucopurulent and, infrequently, blood stained. Antibiotics produce no definite response, but recovery is eventually complete.

In some instances, infected mucus from the upper respiratory tract acts as a bronchial embolus, producing an area of collapse and infection.

With *acute pleurisy*, a pleural rub at the corresponding painful region may be the only abnormal chest sign. Roentgenograms may show a small patch of consolidation, in the affected area, that clears in weeks to months.

Severe asthma often results in great distress. Hospitalization is sometimes necessary.

Spontaneous pneumothorax is manifested by a sudden onset of pain and a variable degree of dyspnea. Usually no previous chest trouble has occurred.

Insulin Hypoglycemia for Sleep Paralysis

HERBERT A. WEITZNER, M.D.

IN ATTACKS of sleep paralysis, the conscious sensory phase of awakening is followed by a period of inability to move the voluntary muscles. Even the power of speech may be lost for as long as ten minutes. Terrifying episodes may occur one to four times nightly.

A course of insulin hypoglycemia may give complete relief. Treatment probably improves the sleep-regulating function of the hypothalamus, comments Herbert A. Weitzner, M.D., of the Permanente Foundation Hospital, Oakland. The dose is adjusted to produce a slight reaction, shown by sweating within an hour and a quarter, and counteracted immediately by food. Intervals between doses are gradually lengthened.

To protect the adrenals, 4 gm. of ascorbic acid may be taken orally each day in divided doses.

A man with almost nightly paralysis on awakening from vivid dreams was treated successfully, although for ten years the longest time between attacks was two and a half weeks. At the last report, except for 1 relapse, remission had lasted fourteen months, the final two months being without insulin therapy.

From 20 to 25 units of regular insulin was injected intramuscularly every other day for the first two weeks and then at intervals lengthened every fortnight by one day; by the ninth and tenth weeks, injections were given weekly.

Sleep paralysis successfully treated with insulin hypoglycemia. Arch. Neurol. & Psychiat. 68:835-841, 1952.

A STATEMENT ON RHEUMATIC FEVER

Prepared by the Committee on Prevention of Rheumatic Fever of Council on Rheumatic Fever and Congenital Heart Disease, American Heart Association

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RHEUMATIC FEVER is a recurrent disease which can be prevented. Authorities generally agree that both initial and recurrent attacks of the disease are usually precipitated by infections with beta hemolytic streptococci. Therefore, the prevention of rheumatic fever and rheumatic heart disease depends upon the control of streptococcal illnesses. This may be successfully accomplished by

1] Early and adequate treatment of streptococcal infections in all individuals

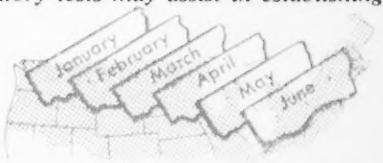
2] Prevention of streptococcal infections in rheumatic subjects.

TREATMENT OF STREPTOCOCCAL INFECTIONS

In the general population, at least 3% of untreated streptococcal infections are followed by rheumatic fever. Among certain individuals, especially those with previous rheumatic fever, the incidence is much higher. Adequate and early penicillin therapy, however, will prevent most attacks of rheumatic fever and eliminate streptococci from the throat.

DIAGNOSIS *of Streptococcal Infection*

In most instances streptococcal infections can be recognized by clinical manifestations, but laboratory tests may assist in establishing the diagnosis.



EPIDEMIOLOGY: The seasonal pattern and presence of similar cases in the community or household may be helpful. For example, streptococcal infections in the northern United States are most common from January through June. Likewise, a case of scarlet fever in one child would suggest that a sore throat in another has the same etiology.

Symptoms

Sore throat—onset sudden, in the tonsillar area, not in the trachea
Headache—common
Fever—variable, but generally from 101 to 104°F
Abdominal pain—common, especially in children; not common in adults, but does occur
Nausea and vomiting—common, especially in children
The following symptoms are usually *not* present: [1] **simple coryza,** [2] **cough,** and [3] **hoarseness.**

Signs

Red throat—frequently beefy red; if seen early the redness may be mild.
Exudate—usually present
Glands—swollen, tender tonsillar glands at angle of jaw
Rash—scarlatiniform (characteristic of scarlet fever, not common)
Discharge—otitis media and sinusitis, indicated by serous or purulent aural or nasal discharge, often seen with streptococcus pharyngitis

Laboratory

White blood count—generally over 12,000; frequently over 20,000 in children
Throat culture—positive for hemolytic streptococci

Therapeutic Response

Almost without exception, patients with streptococcal infections are vastly improved and have normal or nearly normal temperatures within twenty-four hours after penicillin has been started. If this characteristic therapeutic response does not occur, the chances are much against the disease being caused by hemolytic streptococci.

TREATMENT *of Streptococcal Infections*

To be effective, treatment should be started as soon as streptococcal infection is suspected and continued long enough to eradicate the streptococci from the throat.

PENICILLIN is the drug of choice for treating streptococcal infections.

Both the oral and the intramuscular routes of administration have been utilized successfully for penicillin therapy of streptococcal infections. Intramuscular injections have been proved to prevent rheumatic fever. Data on the value of oral penicillin as a preventive are less complete.

Oral administration has these advantages over intramuscular administration:

Not as distasteful to many patients

Requires fewer physician visits

Oral administration has these disadvantages:

Larger amounts of penicillin needed

Difficult to administer to vomiting or refractory children

Causes persistent diarrhea and pruritus ani in some adults

No assurance that treatment will be continued sufficiently long or given in proper relation to meals to be effective

RECOMMENDED SCHEDULES

Intramuscular Penicillin

Children—1 intramuscular injection of 300,000 units of procaine penicillin with aluminum monostearate in oil *every third day for 3 doses.*

Adults—1 intramuscular injection of 600,000 units procaine penicillin in aluminum monostearate *every third day for 3 doses.*

Note: Less preferable, but usually effective—2 doses as above at three-day intervals.

Oral Penicillin

First five days: 200,000 to 300,000 units one-half to one hour before meals and at bedtime (total of 800,000 to 1,200,000 units per day in 4 divided doses. Smaller amount for children—larger amount for adults).

Second five days: 200,000 to 250,000 units one-half to one hour before meals (total of 600,000 to 750,000 units per day in 3 divided doses).

Note: To be effective, therapy should be continued for the entire ten days even though the temperature may return to normal and the patient may feel better within one or two days.

TREATMENT *of Streptococcal Infections*

Combined Intramuscular and Oral Penicillin

Therapy may be begun with 1 injection of penicillin (300,000 units of procaine penicillin with aluminum monostearate in oil) and then, starting three days after the injection, continued for an additional seven days with oral penicillin 200,000 to 250,000 units one-half to one hour before meals (total of 600,000 to 750,000 units per day in 3 divided doses).

Other Medication

Aureomycin is less effective than penicillin in controlling streptococcal infection but is especially useful for patients sensitive to penicillin. Dosage: Total of 10 mg. per pound of body weight in 4 divided doses daily for two days. Dose is cut in half for remaining eight days of therapy.

New Preparations of Penicillin may be effective and even preferable to the treatment schedules outlined, but at present have not had sufficient trial to warrant recommendation.

Other antibiotics have not been adequately evaluated.

NOT RECOMMENDED FOR TREATMENT

Penicillin troches or lozenges
Penicillin followed by sulfonamides
Sulfonamide drugs

Note: Recurrences of streptococcal infection should be treated as primary attacks.

PROPHYLAXIS . . . *General Rules*

Who should be treated?

All individuals under the age of 18 who have had rheumatic fever or chorea and all those over this age who have had an attack within five years.

When should prophylactic treatment be initiated?

At the end of the second week of the attack of rheumatic fever or any time thereafter when the patient is

PROPHYLAXIS . . . *General Rules*

first seen.* Before the start of prophylaxis, beta hemolytic streptococci should be eradicated by proper treatment.

How long should prophylaxis be continued?

For children, at least to the age of 18; for all those above this age, at least five years from the last attack.

Should prophylaxis be continued during the summer?

Yes.

*Note: In patients receiving ACTH or cortisone, the physician should be sure that other infections are not masked. The prophylactic dose is inadequate to treat such concurrent illnesses as pneumonia or meningitis.

PROPHYLAXIS . . . *Methods*

Sulfadiazine This drug has the advantage of being easy to administer, inexpensive, and effective. Other newer sulfonamides are probably equally effective. Although resistant streptococci have appeared during mass prophylaxis with sulfadiazine in the Armed Forces, this occurrence is rare in civilian populations.

Dosage—from 0.5 to 1 gm. each morning throughout the year. The smaller dose is to be used for children under 60 lb.

Toxic reactions—infrequent and usually minor. However, all rashes and sore throats in patients receiving prophylaxis with sulfonamides should be considered possible toxic reactions to the drug, especially if occurring in the first eight weeks of prophylaxis. The chief toxic reactions are:

Skin Eruptions **Morbilliform,** much like measles. Drug should be continued with caution.

Urticarial. Treatment best discontinued.

Scarlatiniform, often associated with sore throat and fever. Unsafe to continue drug.

PROPHYLAXIS . . . *Methods*

Blood Reactions

Leukopenia. Drug should be discontinued if white blood count falls below 4,000 and polynuclear neutrophils below 35% because of possible agranulocytosis which is often associated with sore throat and a rash. Because of these reactions, weekly white blood counts are advisable for the first two months of prophylaxis. The use of sulfonamides therapeutically for any reason in this period should be preceded by a white blood count. The occurrence of agranulocytosis after eight weeks of continuous prophylaxis with sulfonamides is extremely rare.

Penicillin

Although experience with oral penicillin for prophylaxis of rheumatic fever is more limited than that with the sulfonamides, the antibiotic promises to be a safe and effective prophylactic agent. Oral penicillin has the desirable characteristics of being bactericidal for hemolytic streptococci and of rarely producing serious toxic reactions. Penicillin has the disadvantage of costing more than sulfadiazine and is somewhat more difficult to administer, being best absorbed by an empty stomach.

Oral penicillin is an alternative drug for rheumatic fever prophylaxis and is especially important for patients who do not tolerate sulfadiazine.

Dosage

Although other routines of administration may prove satisfactory, the following schedules are suggested: Since penicillin is best absorbed by an empty stomach, administration should be one-half to one hour before a meal or at bedtime; 200,000 to 250,000 units two times daily is recommended. A single dose of 200,000 to 250,000 units before breakfast is less desirable.

Toxic Reactions

Urticaria; reactions similar to serum sickness, including fever and joint pains which may be mistaken for manifestations of rheumatic fever; and angioneurotic edema.

Many individuals who have had reactions to penicillin can subsequently take the drug without trouble. However penicillin is best not used if the reaction has been severe, particularly if angioneurotic edema has occurred.

¶ ORAL THERMOMETERS remain practically 100% contaminated when only wiped dry after use. Cleansing is also insufficient to sterilize instruments infected with staphylococci, streptococci, and diphtheria and tubercle bacilli from patients' sputa but should precede disinfective measures. Lucille Sommermeyer and Martin Frobisher, Jr., of the Communicable Disease Center of the Public Health Service, Chamblee, Ga., find that viable pathogens are reduced to a very low level when the thermometer is wiped with cotton wet with equal parts of 95% alcohol and tincture of green soap and then immersed for ten minutes in a 0.5 to 1% solution of iodine in either 70% ethyl or isopropyl alcohol. Aqueous iodine solutions and the alcohols alone are nearly as effective.

Nursing Research 1:32-35, 1952.

Prognosis with Myocardial Infarction

HENRY I. RUSSEK, M.D., AND BURTON L. ZOHMAN, M.D.

A MORE optimistic attitude than now prevails is justified with respect to the chances for recovery from an uncomplicated first attack of acute myocardial infarction.

Crude mortality statistics in unselected cases have created the impression that the immediate prognosis with acute myocardial infarction is always ominous, regardless of the benignity of the attack. Actually, patients who do not have congestive heart failure, profound shock, arrhythmias, or other significant signs at the onset have an excellent prognosis, particularly when survival extends beyond the first few days, declare Henry I. Russek, M.D., of the U. S. Public Health Service Hospital, Staten Island, and Burton L. Zohman, M.D., of the State University of New York, Brooklyn.

An analysis of 489 so-called good risk cases in which no serious prognostic criteria were observed on the day of admission reveals a mortality rate of only 3.1% during hospitalization and only 1.2% from cardiovascular causes for those surviving forty-eight hours.

Since almost half the deaths occurred suddenly within the first two days of hospital admission, moving of a patient to a hospital should be delayed at least forty-eight hours to decrease the risk entailed by the trauma of transportation. While immediate hospitalization has been advised so that anticoagulants can be given, such therapy carries the risk of hemorrhage and is unlikely to influence the death rate favorably in this type of case.

Prognosis in the "uncomplicated" first attack of acute myocardial infarction. Am. J. M. Sc. 224:496-499, 1952.

In using antimicrobial agents, probable good effects must be weighed against the possible hazards.

Complications of Antimicrobial Therapy

MAXWELL FINLAND, M.D., AND LOUIS WEINSTEIN, M.D.
Harvard University, Boston

EVERY antibacterial agent now available has some capacity for doing harm.

Sulfonamides and some other products involve serious risks; with such compounds as penicillin, danger is slight compared to advantages. All agents, however, may induce hypersensitivity or superinfection by resistant strains.

Powerful drugs should be employed when indicated but never on slight suspicion of need. Possible side effects should be weighed against the condition to be treated and the gains expected from the treatment. Complications involve most organ systems, declare Maxwell Finland, M.D., and Louis Weinstein, M.D.

Skin—The most common cutaneous lesion is morbilliform rash. Less frequent are scarlatiniform, urticarial, vesicular, and bullous eruptions. If blood vessels are involved, large areas may become necrotic. Erythema multiforme or nodosum may appear. The most severe manifestation is exfoliative dermatitis, which may follow morbilliform or scarlatiniform lesions if the offending drug is not withdrawn.

Local reactions at the sites of injections are caused by irritating antibiotics, hypertonic solutions, or highly concentrated cations or anions.

The best remedy for skin lesions is removal of the provocative medicine. Antihistamine therapy relieves pruritus and may limit extent or severity of involvement. ACTH and cortisone, which also reduce itching and edema, may save lives menaced by exfoliative, urticarial, or bullous reactions.

Mouth—At least 33 different oral manifestations occur, usually from aureomycin, chloramphenicol, or terramycin. Symptoms are chiefly dryness, soreness, burning, and itching of mouth and tongue. Lozenges and troches are especially irritating, and efficacy of such agents is doubtful.

Other reactions of hypersensitivity—Drug fever occurs alone or with other changes, particularly rashes.

Contact dermatitis from handling of penicillin or streptomycin usually involves the hands and face and may entail edema and vesiculation or eczema. Sometimes rhinitis and asthmatic breathing occur.

Potent sensitizers are ointments and oily suspensions of antibiotics. If possible, skin disease should be controlled by parenteral or oral therapy.

Complications induced by antimicrobial agents. New England J. Med. 248:220-226, 1953.

Serum sickness, with fever, urticaria, eosinophilia, and, at times, purpura, arthralgia, and enlarged lymph nodes and spleen, is associated with repository penicillin in beeswax and oil or with procaine penicillin in oil and aluminum monostearate. Less often streptomycin is the provocative agent.

Anaphylaxis, periarteritis nodosa, or disseminated lupus erythematosus may develop after continuous or repeated therapy of persons with allergic tendencies. If an allergic individual has previously received a particular drug, further therapy or sensitivity tests should be started cautiously, with remedies for anaphylactic reaction at hand.

Gastrointestinal tract and liver—Alimentary disturbances are most frequent with broad spectrum antibiotics. However, oral doses of penicillin, streptomycin, or poorly absorbed sulfonamides may also cause heartburn, nausea, vomiting, and diarrhea.

Severe diarrhea with dehydration and perhaps fatal prostration may result from aureomycin, terramycin, or, less often, chloramphenicol dosage. Overwhelming infection by *Staphylococcus aureus, Pseudomonas,* or *Proteus* is probably responsible.

Liver damage may be caused by intravenous injection of excessive amounts of aureomycin or terramycin or, less often, chloramphenicol. Fatty changes are not seen with oral doses of 1 or 2 gm. per day.

Urinary tract—During sulfonamide therapy, daily urine output should be at least 1,200 cc. Otherwise, even the most soluble compounds may form crystals and damage the kidneys. A different and more serious type of reaction is complete renal shutdown for ten to fourteen days. In this period overhydration must be avoided.

Streptomycin too may impair renal function. Polymyxin, bacitracin, and neomycin are so toxic that use should be reserved for emergencies.

Nervous system—Streptomycin affects chiefly the vestibular branch of the eighth cranial nerve; neomycin and dihydrostreptomycin, the auditory nerve. For tuberculosis, streptomycin should be given only twice a week and PAS daily.

Untoward reactions to intrathecal penicillin or streptomycin therapy may be avoided. Adults should have no more than 50,000 units of penicillin or 100 mg. of streptomycin, in single doses, using at least 10 cc. of saline for dilution. Before therapy, a larger amount of spinal fluid than is to be injected is withdrawn slowly. The rate of injection should not exceed 1 cc. per minute, and final pressure should not be above normal. If meningeal or cerebral irritation is much increased after the injection, lumbar puncture is done and high pressure is reduced by withdrawal of spinal fluid.

Blood—Fatal aplastic or hypoplastic anemia may follow long or repeated treatment with chloramphenicol. The drug should not be given for trivial respiratory or cutaneous infections.

Miscellaneous effects—The agents that inhibit gram-negative bacteria

may increase growth of gram-positive forms, and vice versa. The greatest offenders are *P. vulgaris, Ps. aeruginosa, Staph. aureus, Candida albicans,* and, in children taking penicillin, *Hemophilus influenzae.*

Localized abscesses about penicillin injection sites are largely due to the coliform bacilli.

Potentially the most serious complication of antibacterial therapy is emergence of organisms resistant to most or all drugs. For example, 25% of staphylococcic strains recently isolated at Boston City Hospital were sensitive to penicillin, in contrast to the 85% which were susceptible during the first years of use.

Stenosing Coronary Arteritis

FREDERICK G. ZAK, M.D., MILTON HELPERN, M.D., AND DAVID ADLERSBERG, M.D.

FATAL occlusion of coronary arteries in young persons is sometimes associated with varying degrees of inflammation in the affected segment.

Does atherosclerosis in old age result from similar inflammatory lesions? The century-old question was revived by 8 cases of stenosing coronary arteritis recently observed at Mount Sinai Hospital and the Office of the Chief Medical Examiner, New York City.

The first case was that of a 27-year-old man noticed during analysis of 50 coronary deaths in patients under 46 years of age. When 25 similar fatalities were reviewed, 7 additional cases were found.

In a heart with this type of coronary disease, the left anterior descending coronary is usually eccentrically narrowed and occluded by a fresh thrombus. The most important microscopic change is the large number of polymorphonuclear leukocytes in the thickened edematous intima and in the media. Other coronary arteries may contain only slight atherosclerotic lesions.

If episodes of acute recurrence are outlived, the end stage is morphologically indistinguishable from the genuine form of atherosclerosis, with distortion and deposits of hyaline, lipids, and lime salts.

Similar inflammatory mechanisms may be responsible for other vascular disorders, suggest Frederick G. Zak, M.D., Milton Helpern, M.D., and David Adlersberg, M.D. In many ways, stenosing coronary arteritis resembles periarteritis nodosa, rheumatic arteritis, and Buerger's disease, as well as acute obstructive conditions due to infection, toxin, or allergy.

Stenosing coronary arteritis. Angiology 3:289-305, 1952.

Despite recent advances, therapy of ulcerative colitis remains symptomatic, protracted, and often unpredictable.

Treatment of Ulcerative Colitis

JOSEPH B. KIRSNER, M.D., AND WALTER L. PALMER, M.D.
University of Chicago

ALTHOUGH etiology of ulcerative colitis is obscure, therapy can be adapted to the individual needs of the patient with some success. General therapeutic objectives are: rest, elimination of infection, restoration of nutrition, and solution of the emotional difficulties. Serious complications may need surgical intervention.

The three chief therapeutic approaches, according to Joseph B. Kirsner, M.D., and Walter L. Palmer, M.D., of the University of Chicago, concern chemotherapy, steroid hormones, and colectomy.

Incidence of cancer of the bowel with chronic ulcerative colitis—estimated variously from 1.5 to 7%—is significantly higher than for the general population. The carcinoma tends to occur at an earlier age than usual, often is multicentric in origin, and is highly invasive.

Psychotherapy—Though the precise significance of psychogenic factors is unknown, recurrences and chronicity of ulcerative colitis are often related to emotional stress. Formal uncovering psychotherapy, however, is usually best avoided during active phases of the disease.

Chemotherapy—Antibiotics and sulfonamides will decrease the total bacterial counts in the intestine and establish a predominantly gram-positive flora, but the clinical course is unaffected and the suppression does not persist even if chemotherapy is continued. Many patients cannot tolerate aureomycin, terramycin, or chloramphenicol. Apparently these substances directly irritate the bowel, causing abdominal distress, nausea, vomiting, and diarrhea. Sulfaguanidine has produced promising results when used to supplement other therapeutic measures. Azopyrin may be helpful, but effects are variable.

Steroid hormone therapy—ACTH is more effective than cortisone, but either compound may produce dramatic improvement. Neither is a cure. Some patients respond less and less to treatment; in other cases systemic and dermal sensitivity to the medication may develop.

Colectomy—An acutely ill patient requiring surgery should almost always have colectomy and not ileostomy alone. Taking out the colon removes both the disease process and the source of the profound toxemia. Among the indications for surgery are cancer of the bowel, resistance to medical therapy, and severe conditions such as toxemia or massive hemorrhage.

Therapeutic problems in ulcerative colitis. M. Clin. North America 37:247-259, 1953.

Available antineoplastic agents may arrest or palliate some types of cancer, but none is curative.

Chemical Agents for Neoplastic Disease

HOWARD R. BIERMAN, M.D.
University of California, San Francisco

THOUSANDS of chemical substances have now been assayed for antineoplastic activity, yet cancer chemotherapy today remains arrestive and palliative only.

The increasing number of promising chemical agents presents a complex problem to the physician attempting to select the best drug for a particular patient. Relatively few agents have been sufficiently investigated for full evalution. About a dozen have shown unequivocal evidence of value in the treatment of human neoplastic disease.

Complicating the problem is the fact that a given agent may arrest some neoplasms and yet be only palliative or even totally ineffective for others. Similarly, agents that are ineffective when given by intravenous injection may produce temporary arrest of some tumors if given by other modes of administration.

For arrestive treatment of the lymphomas, radiomimetic chemical agents have been most effective. Nitrogen mustard (HN_2) is a useful adjunct to radiotherapy for Hodgkin's disease and is particularly serviceable after irradiation has lost effect. Mycosis fungoides and lymphoblastic and lymphocytic types of lymphosarcoma also respond to this drug for short periods.

The preferred therapeutic procedure consists of a single dose of 0.3 to 0.4 mg. of HN_2 per kilogram of body weight injected into the full flow of a rapid intravenous saline infusion. HN_2 injected directly into the arterial supply of a tumor bed may cause considerable destruction in tumors unrelated to the lymphoid series.

The pharmacologic action and antineoplastic potency exerted by triethylene melamine (TEM) are similar to those with HN_2. Somewhat less effective and more unpredictable than HN_2 for Hodgkin's disease, TEM has the great advantage of being administered by the oral route. Beta-naphthyldi-2-chloroethylamine (R-48) also is given orally, but maintenance doses are difficult to establish. Hemi-sulfur mustard (HSM), about 1/13 as toxic as HN_2, has been effective in reducing ascites, presumably from peritoneal carcinomatosis.

Mitotic inhibitors constitute a class of chemical agents extensively investigated. Topical application of colchicine or podophyllin, a mixture of plant resins, will remove condyloma acuminata.

Chemical agents in neoplastic diseases. California Med. 78:44-58, 1953.

Urethane in daily amounts of 1 to 4 gm. orally causes a fall in peripheral leukocytosis, a general clinical improvement, and reduction of hepatosplenomegaly and lymphadenopathy in some patients with chronic myelogenous leukemia. The preferred drug therapy for myeloid leukemia is, however, 1,4, dimethane sulfonoxy butane (GT-41) given for four weeks in daily doses of 8 mg.

Urethane has provided some relief for 9 of 16 patients with widespread multiple myeloma. The blood condition may improve and fever and skeletal pain subside within two to four weeks. Recalcification of skeletal lesions has been observed in some cases within four to six months.

Antimetabolite therapy lacks specificity for the tumor cell. Thus when any one of the 4-amino derivatives of folic acid is used for leukemia therapy, rather devastating systemic symptoms of folic acid deficiency are quick to appear. Careful regulation of dosage and use of folic acid or citrovorum factor may partly ameliorate these deleterious aspects.

Children with untreated lymphatic leukemia live about 5.6 months. The average survival may be increased to approximately 8.9 months by blood and antibiotic therapy alone; addition of antagonists and hormones does not lengthen this survival period. Howard R. Bierman, M.D., stresses, however, that 18.6% of patients treated three weeks or longer with folic acid antagonists survive more than twelve months.

Hormonal therapy is used for lesions of the breast, prostate, uterus, and lymphatic and hematopoietic systems. Approximately 25% of patients with advanced breast cancer will benefit objectively from dosage with estrogenic or androgenic hormones.

Postmenopausal women respond better to estrogens than do premenopausal women. Effects are best if patients are at least five years past the menopause. Treatment recommended for soft tissue lesions of premenopausal patients is castration and androgen therapy.

Orchiectomy and estrogen therapy are the most effective hormonal treatment for carcinoma of the prostate.

Sex hormones may be administered intramuscularly, orally, or by pellet implantation. Dosage varies widely with method of administration and the particular hormone derivative selected.

Cortisone and corticotropin have produced striking changes in hematologic dyscrasias. To obtain therapeutic results in the leukemias or lymphomas, cortisone dosage must be forced until at least part of the Cushing syndrome appears.

Close observation of the patient receiving cancer chemotherapy is essential. All the useful chemical agents have severe toxic manifestations, and accumulation of multiple doses can produce effects far beyond expectation. Depression of the hematopoietic system is almost universal with cancer drugs. Therefore hematologic studies, including thrombocyte counts, must be done frequently.

¶ DIABETIC RETINOPATHY may completely disappear and the diabetes ameliorate after the development of Simmonds' disease. Jacob E. Poulsen, M.D., of Niels Steensens Hospital, Gentofte, Denmark, finds the Houssay phenomenon in a 30-year-old woman after onset of the Sheehan type of pituitary dysfunction immediately post partum. Complicated delivery of a dead fetus had been preceded by 2 miscarriages; the patient had had diabetes since the age of 9. Ocular lesions with hemorrhages and waxy exudates are probably the consequence of metabolic hormonal disorder and may be curable. The importance of corticosteroids in the production of ketones is confirmed by the inability to cause ketonemia and ketonuria in this patient unless cortisone is administered.

Diabetes 2:7-12, 1953.

Isoniazid with Other Antitubercular Drugs

MILDRED THOREN, M.D., AND H. CORWIN HINSHAW, M.D.

PATIENTS with advanced pulmonary tuberculosis generally improve during the first two months of treatment with isoniazid. Tubercle bacilli usually become resistant, however, and in half the cases, relapse occurs within six months.

Either streptomycin or para-aminosalicylic acid combined with isoniazid yields better and more lasting results. Yet, although bacterial resistance is slightly delayed, infection is still only temporarily suppressed.

Mildred Thoren, M.D., of Weimar Joint Sanatorium, Weimar, Calif., and H. Corwin Hinshaw, M.D., of Stanford University, San Francisco, treated 45 tuberculous individuals in 3 groups for six months. Isoniazid was given alone to 17, in doses of 200 mg. daily by mouth; with 12 gm. of oral PAS to 14; and with streptomycin, 1 gm. intramuscularly twice a week, to 14.

During the first two months, about 80% of all 3 groups improved in appetite and well-being, while cough and expectoration diminished and roentgen lesions occasionally decreased.

After six months, when only 50% of those taking isoniazid alone held their gains, more than 90% of the others continued to mend. But in a larger series of cases, 54% of cultures showed bacterial resistance after two months of isoniazid therapy, and 95% after four months. With added streptomycin for the same periods, resistance developed in 17 and 75% of cultures, respectively.

Therapy of pulmonary tuberculosis with isoniazid alone and in combination with streptomycin and with para-amino-salicylic acid. Stanford M. Bull. 10:316-318, 1952.

A logical anatomic approach is presented for solution of a difficult problem in herniorrhaphy.

Recurrent Direct Inguinal Hernia

WILLIAM M. MC MILLAN, M.D., AND
ROBERT T. MC ELVENNY, M.D.
Northwestern University, Chicago

USE of an osteoperiosteal flap from the pubis offers a firm repair for herniations through Hesselbach's triangle that are recurrent or lack adequate fascia for orthodox procedures.

The procedure is anatomically sound and makes use of structures strong enough even in the poorest prospect.

Poor results may follow herniorrhaphy for recurrent direct inguinal hernia when a fascial transplant or tranversalis fascia is employed. The fascia has already proved inadequate when the hernia recurred. Permanent fixation of a bone transplant or skin or metal support also poses a problem, since this internal truss must be fixed about the entire perimeter of the area.

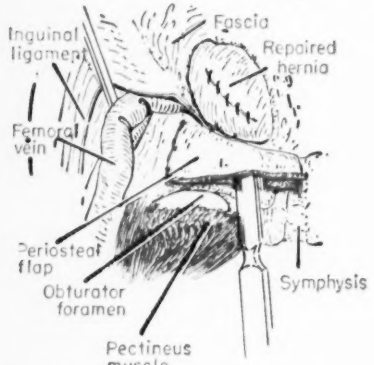


Fig. 1. Periosteal flap raised

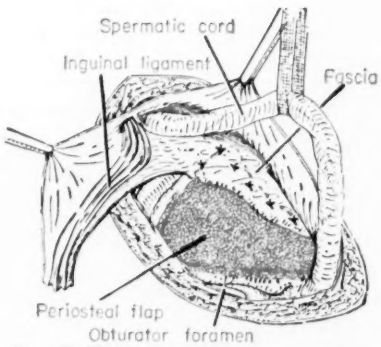


Fig. 2. Flap turned up over repair

A periosteal pubic flap is not a foreign body but a living anatomic component. Being continuous with the periosteum of the pubis, the flap does not permit bulging or stretching along the lower margin.

The anterior and superior aspect of the pubic ramus will permit the elevation of a strip of periosteum medial to the femoral vein, extending to the middle of the pubis. The average strip or flap so raised will measure about 5 cm. in length and nearly 4 cm. in width at the widest point.

William M. McMillan, M.D.,

A new surgical approach for repair of recurrent direct inguinal hernia. J. Internat. Coll. Surgeons 18: 759-763, 1952.

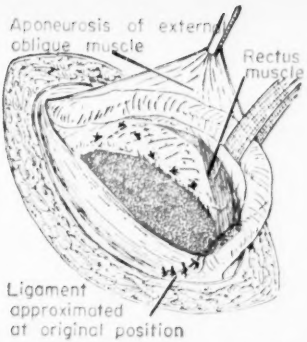


Fig. 3. Poupart's ligament replaced

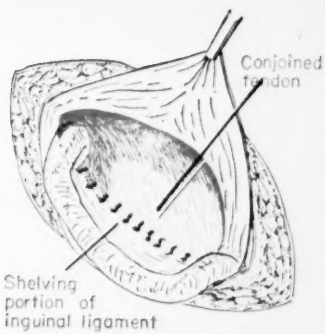


Fig. 4. Repair completed

and Robert T. McElvenny, M.D., make the usual inguinal herniorrhaphy incision through the skin, subcutaneous tissue, and external oblique muscle. The cord is freed and elevated on cord tape, transversalis fascia flaps are prepared, the peritoneum is opened, and the hernial sac is resected and closed in the usual manner.

Poupart's ligament is severed from the pubic attachment and along the lower margin laterally to the femoral vein. The vein is retracted laterally and protected from injury.

The pectineus fascia is incised transversely over the lower margin of the pubic ramus. The pectineus muscle is then sectioned by scraping away the fibers, exposing the inferior anterior margin of the ramus.

A periosteal flap is raised, starting with a transverse incision through the periosteum extending from the level of the retracted femoral vein along the lower margin of the inferior anterior aspect of the superior ramus of the pubis medialward to the middle of the symphysis (Fig. 1). Below, the thin fascial layer overlying the obturator foramen which carries numerous small vessels can be seen.

The flap is then elevated, carrying a thin layer of bone to prevent perforation. After being freed well upward and inward, a firmly attached flap is obtained continuous with and a part of the periosteal lining of the pubic ramus (Fig. 2).

The flap is turned superiorly and medially and secured to the medial layer of the endoabdominal fascia, the suture also including the lateral edge of the rectus sheath. The medial end of Poupart's ligament, previously detached, is then fixed to the original site (Fig. 3). The lateral edge of the external oblique is thus external to the periosteal flap, forming an additional support to the area.

The aponeurotic falx or conjoined tendon is then sutured to the shelving edge of Poupart's ligament, and the spermatic cord is dropped back (Fig. 4). Edges of the external oblique are united anterior to the cord, completing the repair.

For postphlebitic syndrome, excise large superficial veins, interrupt deep ones, and sever communicators.

Treatment of Postphlebitic Syndrome

ROBERT R. LINTON, M.D.
Massachusetts General Hospital, Boston

CHRONIC postphlebitic ulceration of the lower extremity develops from ambulatory venous hypertension caused by incompetent valves in the deep, superficial, and communicating systems of veins, the result of previous deep venous thrombosis.

A radical operative procedure is recommended by Robert R. Linton, M.D., as the only means of ridding the patient of the sequelae of deep vein thrombosis of the lower extremities—edema, pain, varicose veins, skin pigmentation, stasis dermatitis, chronic induration of the subcutaneous tissues, and chronic ulceration.

Of great significance is the fact that these sequelae do not develop while the deep veins are occluded by thrombi nor does the syndrome occur after femoral vein interruption for treatment of the acute thrombotic state. The lesions appear when the deep venous system has become patent again after canalization of the thrombus, but without functioning valves.

Most of the undesirable sequelae of the thrombotic state, including ulceration, disappear if the venous pressure is reduced in these extremities by elevation of the limb above heart level. The scarring of the subcutaneous tissues, pigmentation, and varicose veins of the superficial system tend to persist.

Temporary treatment—Chronic postphlebitic ulceration must be healed before definitive surgery can be performed. One method of healing ulcers is to put the patient to bed, elevate the extremity above the level of the heart, and apply moist saline dressings three or four times daily, but this treatment is not practical because of the great length of time required in bed.

A better method is ambulatory, utilizing compression bandages to reestablish venous return from the legs. The patient can continue work and needs to visit the doctor only every two weeks for change of dressing. The leg is painted from the toes to the knee with an alcoholic solution of resin, and a thick gauze dressing with white petroleum jelly is placed over the ulcerated area.

The leg is then bandaged from toes to knee with a 15-yd., 4-in. wide gauze bandage. The gauze becomes intimately adherent to the skin and, because of the tacky resin solution painted on the dressing, does not slip and cause excoriation.

Modern concepts in the treatment of the postphlebitic syndrome with ulcerations of the lower extremity. Angiology 3:431-439, 1952.

A 4-in. wide, 3-yd. long elastic adhesive bandage is then applied very tightly, beginning above the ankle and covering the ankle, heel, and foot to the base of the toes. The bandage is carried up the leg to the level of the tibial tubercle and back down to the ankle, always wrapping from the inside of the leg toward the outside.

Ambulation is encouraged after bandaging.

Surgical treatment—For best results the surgical therapy should [1] remove all large superficial veins in the subcutaneous tissues, [2] sever most of the communicating veins, especially on the inner side of the lower leg, [3] interrupt the long column of blood in the valveless deep venous system by ligation of the superficial femoral vein just distal to the junction with the profunda, and [4] aid lymph flow from the subcutaneous tissues in the skin by excising some of the deep fascia of the lower leg.

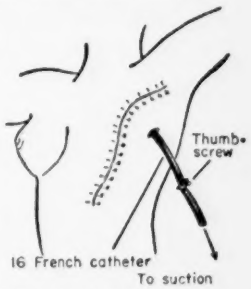
After operation, as long as the extremity has a tendency to swell, the patient wears a heavy-weight, two-way stretch elastic stocking with a heel.

Drainage after Radical Mastectomy

ARTHUR B. RAFFL, M.D.

NEGATIVE pressure to hold the skin flaps against the thoracic wall prevents fluid accumulation after radical mastectomy. The technic used by Arthur B. Raffl, M.D., of the State University of New York, Syracuse, promotes healing, reduces marginal skin necrosis, and avoids cumbersome dressings.

After the mastectomy, a small stab wound is made in the lower skin flap near the border of the latissimus dorsi muscle (see illustration). A 16F catheter, with 3 holes near the tip, is inserted snugly into the wound. The skin flaps are closed with vertical mattress sutures, placed near enough to prevent any leakage. Petrolatum-impregnated gauze strips make the wound airtight.



In the operating room, negative pressure is obtained through the catheter with suction. When the skin flaps are snugly positioned against the thoracic wall, a thumbscrew is applied. The patient is returned to her room, where the catheter is attached to a Wangensteen apparatus or other suction system and the thumbscrew is opened. The catheter is removed after seventy-two hours. This method cannot be used if skin grafting is necessary.

The use of negative pressure under skin flaps after radical mastectomy. Ann. Surg. 136:1048, 1952.

Good results with surgery for ulcer depend more on amount of stomach resected than on technic.

Billroth I Operation for Peptic Ulcer

STEN WALLENSTEN, M.D., AND LARS GÖTHMAN, M.D.
Lasarettet, Falun, Sweden

SUBTOTAL gastrectomy by the Billroth I method, in which gastroduodenal continuity is maintained, is the best treatment for complicated peptic ulcer. The technic is physiologically preferable to the Billroth II procedure.

Absolute indications for surgery are stenosis, probable cancer, and massive hemorrhage. Surgery is advisable if roentgenologic evidence of bulb deformity is found with duodenal ulcer, despite short duration of symptoms and only 1 or 2 attempts at dietary management. With gastric ulcer, the degree of invalidism often determines when operation is needed. Gastric ulcers are now often operated upon at an early stage, especially in elderly patients because of the danger of carcinoma.

Preoperative condition should always be carefully evaluated, emphasize Sten Wallensten, M.D., and Lars Göthman, M.D. Anemia is treated with blood, plasma, and transfusions of amino acid solutions. Nutritional deficiencies are corrected by a liberal diet with vitamin supplements.

Care is taken to balance water and electrolytes postoperatively. Parenteral fluids are given in only small quantities during the immediate postoperative period to obviate edema at the site of anastomosis and attendant obstruction.

On the day after surgery up to 600 cc. of fluid is allowed orally; this is rapidly augmented on subsequent days. A duodenal tube is used only if signs of retention develop, not as a prophylactic measure. Patients are usually out of bed on the first postoperative day to avoid thrombosis and to facilitate gastric emptying.

Complications—Operative mortality, which is based on 364 cases, is 2.2%. Hemorrhage from the anastomosis after operation occurred only twice.

Failure of suture in resection is a serious complication with a high death rate and is said to be fairly frequent, especially after the Billroth I operation. Only 1 such instance occurred among the 364 patients.

Gastric retention is the most frequent complication after partial gastrectomy and is possibly the result of vagal denervation of the gastric pouch, resulting in decreased tonus and motility. The best form of treatment is to empty the stomach through a tube, often followed by continuous aspiration.

The postoperative length of treat-

An evaluation of the Billroth I operation for peptic ulcer. Surgery 33:1-20, 1953.

ment at present is 9.4 days, one-half that of a decade earlier.

Late results—The dumping syndrome is peculiar to the postgastrectomy period and occurred in 10.1% of cases. The phenomenon appears either immediately or shortly after a meal and is experienced as distress, a feeling of weakness, faintness, cold sweat, cardiac palpitation, and, rarely, epigastric pain.

The symptoms are relieved usually by lying down after eating. Occasionally reoperation is necessary. Fewer patients have this difficulty after the Billroth I operation than do after the Billroth II gastric resection.

Hypoglycemic attacks after eating are very infrequent.

The nutritional state postoperatively as determined by the body weight curve reveals that a few patients have difficulty maintaining weight. Normal bowel continuity is better maintained than after the Billroth II procedure and food can pass through the duodenum. Postoperative diarrhea is most uncommon.

Anemia is rare after the Billroth I operation.

Gastric carcinoma developed in 5 cases after gastric resection for ulcer, emphasizing the importance of careful histologic study of all such surgical specimens. Even the most experienced surgeon cannot always recognize carcinoma at the operation or by gross examination of an operative specimen.

The over-all evaluation of results of the Billroth I operation is:

1] *Excellent*—Full working capacity, unrestricted diet, complete freedom from gastric symptoms, about 68%

2] *Good*—Full working capacity, entirely free of symptoms, but still keeping to a somewhat restricted diet, over 25%

3] *Fair*—No evidence of ulcer but considerably invalided by late disorders, 2%

4] *Poor*—Proved or suspected recurrent ulcer, unimproved or worse since operation, 4%.

¶ BENIGN BREAST DISEASE is definitely, but to a limited extent, associated with predisposition to cancer. As carcinoma develops from 2.6 to 3.6 times as often in these cases as in the general female population, Edward F. Lewison, M.D., and John G. Lyons, Jr., M.D., of Johns Hopkins Hospital, Baltimore, advise periodic examination of all patients with mastopathy. One type of noncancerous lesion appears no more precancerous than other forms. Among 385 subjects observed for as long as twenty-five years, the average age at onset of the benign condition was 36 years, with extremes of 26 and 50 years. The condition recurred in 13%; cancer developed in 1.8% of the 385 cases. Benign conditions were fibroadenoma in 200 cases, chronic cystic mastitis in 153, and papilloma in 32.

Arch. Surg. 66:94-114, 1953.

Control of adhesions by tautly suspending the intestine on a tube may prevent recurrent obstruction.

Recurrent Intestinal Obstruction

VICTOR P. SATINSKY, M.D., AND SAMUEL D. KRON, M.D.
Albert Einstein Medical Center, Philadelphia

IN cases of actual or anticipated recurrent intestinal obstruction, if definitive surgery is impossible, plication of the intestine by a tube, with total decompression of the small bowel, has many advantages.

The management of chronic recurring intestinal obstruction is a difficult problem for internist and surgeon, emphasize Victor P. Satinsky, M.D., and Samuel D. Kron, M.D. Patients frequently become narcotic addicts to escape the intermittent pain associated with partial intestinal obstruction; malnutrition and chronic invalidism are not uncommon. Some individuals are said to have had 30 laparotomies.

Most methods designed to deter attacks of recurrent obstruction are directed toward prevention of the commonest causative factor, adhesion formation, and consist chiefly of: removal of fibrin by amniotic fluid, papain, or other tissue digestants; prevention of fibrin formation by citrate solution, heparin, dicumarol, or cortisone; or separation of peritoneal surfaces by air, oil, saline, or greasy substances. None of these procedures has proved satisfactory.

The control, rather than the prevention, of adhesions may be accomplished by plicating adjacent segments of bowel by nonabsorbable sutures, but this does not assure an adequate lumen in the immediate postoperative period. Obstruction may occur from edema, constricting adhesions, kinking, or inflammation. Moreover, leakage is possible at the suture sites, with resulting peritonitis or fistula.

A better method is to mobilize the entire small bowel, relieving all mechanical causes of obstruction. A long piece of semirigid rubber tubing, 6 mm. in diameter and containing spirally placed perforations every 1½ in., is then inserted by way of the nostril and threaded through the small intestine into the cecum.

The proximal end of the tube is secured to the nose by sutures. The distal end is brought out through a

Recurrent intestinal obstruction: a new method of treatment. J. Albert Einstein M. Center 1:3-12, 1952.

cecostomy or ileostomy or fixed in the cecum by a balloon device.

The entire small bowel will be found pleated along the tube in an accordian-like fashion (see illustration). The tube is held in position for several days until adhesion formation or peritoneal reaction fixes the bowel, insuring an adequate lumen. With constant suction, the multiple perforations decompress any area involved in closed loop obstruction. The tube is permitted to retract after about one week but is not removed for three to four weeks.

If the tube cannot be maneuvered through the duodenum, a Witzel jejunostomy can be used to introduce the tube into the small bowel. If an ileostomy has been done, closure should not be performed until normal bowel function is ensured.

The procedure is useful when decompression by the Miller-Abbott tube is unsuccessful.

Tube compression is not designed to replace an operation by which a primary lesion causing recurrent obstruction can be eradicated, such as small bowel tumor, but to be used when causative factors cannot be adequately dealt with. The procedure has been successful when no other form of therapy was feasible for alleviation and to prevent recurrent obstruction when the entire small bowel was edematous, red, and friable with complete matting, volvulus, internal herniation, and kinking.

Hypothermia and Closure of Atrial Septal Defect

F. JOHN LEWIS, M.D., AND MANSUR TAUFIC, M.D.

A FREQUENT and disabling cardiac anomaly, atrial septal defect, may be corrected under direct vision with the aid of refrigeration to lower body temperature and reduce the metabolic rate.

Successful closure of an atrial septal defect in a 5-year-old child is reported by F. John Lewis, M.D., and Mansur Taufic, M.D., of the University of Minnesota, Minneapolis.

After anesthesia with Pentothal Sodium and curare, the trachea was intubated and the patient cooled with rubberized blankets through which flowed a cold alcohol solution. When the rectal temperature fell to 28° C., the blankets were removed and the chest entered through the bed of the right fifth rib. The cardiac inflow was occluded for five and a half minutes while the defect, 2 cm. in diameter, was closed. When the clamp and ligatures were removed, the pulse promptly regained strength.

Rewarming was accomplished by placing the patient in water at 45° C. for thirty-five minutes.

Closure of atrial septal defects with the aid of hypothermia; experimental accomplishments and the report of one successful case. Surgery 33:52-59, 1953.

Bowel obstruction by gallstone is difficult to recognize preoperatively; radiologic study may aid diagnosis.

Intestinal Obstruction by Gallstones

ERIC F. ROUTLEY, M.D., AND CHARLES W. MAYO, M.D.
Mayo Clinic, Rochester, Minn.

THE infrequent obstruction of the small bowel by a gallstone is amenable to surgical treatment. The mortality rate, which has been reported at 50%, can be greatly reduced if the condition is correctly managed.

Gallstones are the cause in 1 to 3% of all obstructions of the large and small bowel encountered at operation or autopsy, including obstruction from extrinsic inflammatory mass.

Bowel obstruction by gallstone occurs most frequently in the seventh decade of life and is 6 times as common in women as in men.

Eric F. Routley, M.D., and Charles W. Mayo, M.D., in describing successful outcome in all of 9 surgical cases at the Mayo Clinic during a seventeen-year period, believe that a gallstone enters the gastrointestinal tract most commonly by a cholecystoduodenal fistula, although cholecystogastric, cholecystoenteric, and cholecystocolonic fistulas comprise less common channels.

Choledochoduodenal fistulas are rare, and free perforation of the gallbladder into the peritoneal cavity with subsequent intestinal obstruction by a gallstone is a remote possibility. A stone passing through the common bile duct rarely causes intestinal obstruction.

The usual point of obstruction is in the terminal 2 to 4 ft. of ileum, where the stone's progress is slowed by spasm and definite narrowing and where the size of the stone may be increased by many coatings of fecal content. The calculus uncommonly obstructs the colon or rectum, although impaction at the rectosigmoid narrowing can occur.

Diagnosis is infrequently made preoperatively although, in retrospect, a history of some cholecystic indigestion or colic is commonly noted. The paucity of symptoms or signs is striking. In only 2% of cholecystoenteric or duodenal fistulas does the gallstone cause obstruction; hence, smaller stones are passed readily through the entire intestinal tract. A stone apparently must be at least 2 cm. in diameter to obstruct the intestinal lumen.

When the patient consults a physician, the indications of small bowel obstruction are usually typical. Tenderness and a mass may be found over the cholecystic fistula or over the impacted stone.

The radiologist has the best chance of making the preoperative diagnosis. A plain roentgenogram of the abdomen may reveal, be-

Gallstone obstruction of the small intestine. Postgrad. Med. 12:503-508, 1952.

sides the evidence of obstruction, an opaque shadow of the impacted calculus or demonstration of the fistula by the appearance of gas or barium, if used, in the biliary tree. A previous report of poorly functioning or nonfunctioning gallbladder, with or without cholelithiasis, aids in the diagnosis.

The surgeon as well as the physician should observe the patient's progress during conservative therapy. When the signs and symptoms fail to improve with usual intubation and other treatment, exploration must be employed.

Before surgery, the nasal suction tip should be advanced close to the obstruction site. During the operation, an inflammatory mass may be palpable in the area of the fistula. The distended small intestine can be followed down to the point of stone impaction. This bowel segment should be handled gently, since the bowel wall may be viable, making resection unnecessary.

The intestinal loop is emptied and isolated by rubber-covered clamps and walled off. A longitudinal incision is made in the bowel wall and, after delivery of the stone, viability of the wall is determined. If resection is not required, the incision is closed transversely, to prevent narrowing of the lumen, or longitudinally, maintaining adequate lumen. The rest of the intestine is explored for other stones, and the tip of the intestinal tube is threaded just proximally to but not past the point of obstruction. The tube should be left in place without advancement for a few days after operation.

The gallbladder and fistula are best not disturbed, since residual stones are unlikely and the fistula generally closes spontaneously.

Rarely, second episodes occur postoperatively and, also rarely, multiple attacks of gallstone obstruction appear in the same person at different times.

If such complications do develop, cholecystectomy and repair of the duodenal opening may be found necessary.

¶ DYSMENORRHEA AND MOLIMINA may be effectively controlled by preovulatory androgen therapy without disturbance of the ovulatory cycle. Herbert S. Kupperman, M.D., and Stanley J. Goodman, M.D., of New York University–Bellevue Medical Center and the Newark Clinical Group find that women may be relieved of menstrual pain and premenstrual tension when either methyltestosterone, 10 mg. three times a day, or methylandrostenediol, 25 mg. twice a day, is given for six to eight days, beginning four to six days before the expected time of ovulation. Arrhenomimetic phenomena are unlikely with the latter substance with this dosage. Observation of a secretory endometrium, body temperature rise, and the occurrence of several pregnancies during treatment indicate that ovulation is not inhibited.

Am. J. Obst. & Gynec. 65:141-149, 1953.

Death rate from poliomyelitis rises during pregnancy, but chances of residual paralysis do not.

Pregnancy and Poliomyelitis

VICTOR M. BOWERS, JR., M.D., AND D. N. DANFORTH, M.D.
Northwestern University, Chicago

ALTHOUGH the pregnant woman is no more susceptible than the nonpregnant, acute anterior poliomyelitis contracted during pregnancy is a much more fatal disease.

In a review of 404 massed case reports, Victor M. Bowers, Jr., M.D., and D. N. Danforth, M.D., find that two-thirds of cases occur between the ages of 20 and 29 and that three-fourths of the patients are having a first or second pregnancy.

Susceptibility to poliomyelitis does not vary with the stage of pregnancy, but the mortality is much higher during the last trimester and in the immediate puerperium.

The period immediately after delivery is the most critical, since 12% of the maternal deaths occurred in this small group which comprised only 3.5% of the total 404 cases of poliomyelitis associated with pregnancy.

Pregnancy wastage occurred in one-third of the cases.

The over-all mortality rate is higher during pregnancy, but if the patient survives, the chances of residual paralysis are no greater for the pregnant than for the nonpregnant patients.

Poliomyelitis has little effect on uterine activity or development and adds no undue obstetric hazard. The first and second stages of labor progress normally, and complications of the third stage and immediate puerperium are the same as for healthy women.

However, during the last trimester, the large uterus may impose a considerable burden upon respiratory exchange, which may be already embarrassed by excessive tracheobronchial secretions or by bulbar involvement, and tracheotomy should be used early and freely.

Any time after the thirty-second week of gestation, cesarean section may be lifesaving and should be performed irrespective of prematurity when suction and tracheotomy do not relieve the respiratory difficulties.

Local anesthesia is preferred when feasible or when respiration is impaired. Caudal and spinal anesthesia must not be employed in cases of poliomyelitis.

When the respiration of the patient is satisfactory, labor and delivery may be permitted to progress as usual, sometimes assisted by small amounts of cyclopropane-oxygen mixtures.

The significance of poliomyelitis during pregnancy. Am. J. Obst. & Gynec. 65:34-39, 1953.

Poliomyelitis can be transmitted across the placental barrier. When the disease is acquired in the neonatal period the transmission is possible by maternal contagion, and isolation methods should be diligently practiced; rooming-in is always unsatisfactory in such cases.

When the mother is stricken with poliomyelitis in the first or second trimester, babies delivered at or near term usually are distinctly underweight for that period of gestation.

Third-Degree Perineal Lacerations

RICHARD E. C. MILLER, M.D., AND JAMES E. SAFLEY, M.D.

TEARS involving the sphincter ani and a portion of the anus and rectum are usually the result of injudicious management of labor when fetus and maternal soft parts are disproportionate, or of a combination of predisposing factors. The latter include prolonged labor, chronic vaginal infection, malpresentation, and precipitous delivery.

Diagnosis is made by careful examination of laceration and episiotomy after delivery. The condition should be considered when a patient has fecal incontinence after a traumatic delivery, repair of rectovaginal fistula, or hemorrhoidectomy.

Richard E. C. Miller, M.D., and James E. Safley, M.D., of Tulane University, New Orleans, and Huey P. Long Charity Hospital, Pineville, La., report that third-degree perineal lacerations are commoner than generally believed, 17 cases being seen in a ten-month period in a general hospital of 275 beds.

Lacerations sustained at delivery should be repaired immediately. For old tears, the intestinal tract is sterilized preoperatively by sulfathaladine or streptomycin for three days, or terramycin for two, while vitamin K and a low-residue diet are given. These measures are also used postoperatively.

In all cases, ample mobilization, hemostasis, and correct approximation of tissues, particularly the layers of the internal sphincter, the external sphincter, and the levator ani, are important. No perineal pads are used over the wound, the perineum being cleansed with dilute phenol solution after each voiding.

All patients are out of bed from the first day. Gas pains are treated by insertion of a rectal tube for thirty minutes every two hours. On the fifth postoperative day the patient is given a regular diet, medications are discontinued, and mineral oil nightly is begun. An oil and glycerin enema is given the next day.

Third degree perineal lacerations. Louisiana State M. J. 105:11-15, 1953.

Empirical treatment is never justified in cases of vaginal discharge; investigation is essential.

Diagnosis of Vaginal Discharge

IAN DONALD, M.D.
University of London

TO prescribe treatment for vaginal discharge without a convincing examination is to ignore a large part of the patient's real need. The symptom is common and often accompanied by distressing fears.

If the possibility of malignant disease exists, Papanicolaou smears and appropriate studies are made.

The exclusion of gonorrhea is also of prime importance. The typical profuse discharge, acute inflammation of the vulva, and pus at the external urethral meatus, elicited by pressure, are easily recognized during early stages. Smears show gram-negative intracellular diplococci. Cervical and urethral cultures on McLeod's chocolate-agar medium incubated for the first eighteen hours in 10% carbon dioxide and for the next twenty-four hours in an ordinary atmosphere are confirmatory.

The colonies of gonococci are small, convex, and translucent. Flooding the plate with a 1% solution of tetramethylparaphenylene diamine turns the colonies rapidly to a bright purple—the oxidase reaction.

Among patients with neither surgically amenable nor venereal causes of vaginal discharge, Ian Donald, M.D., finds *Trichomonas vaginalis* to be the most common factor.

The parasite is not always pyogenic and may be found in a healthy vagina. Secondary infection with a variety of organisms helps to establish the punctate vaginitis and, apparently, some change in the vaginal environment is necessary to initiate the disease. Intercourse is one of the principal precipitating causes, though other modes of spread obviously exist. Careless nursing technics may be a serious potential danger.

Many believe that infection may be autogenous from the intestinal canal, but the intestinal and buccal trichomonads are morphologically distinct from the vaginal variety. Experimental inoculation of the vagina with the intestinal species does not reproduce the disease.

Relapses most often follow a menstrual period and are probably frequently caused by an autogenous reinfection from inadequately treated sites. The lowered incidence of trichomoniasis after the menopause and during pregnancy supports the view that recurrent menstrual discharge favors chronic infection.

The discharge due to the *T. vaginalis* is fluid, purulent, and acid to litmus paper and often contains lit-

Etiology and investigation of vaginal discharge. Brit. M. J. 4796:1223-1226, 1952.

tle gas bubbles. In acute cases the vulva is inflamed and tender. The vagina is diffusely reddened and lusterless or scattered red spots are seen, particularly in the fornices and on the portio vaginalis of the cervix.

Specimens are taken with a platinum loop without application of antiseptics or lubricants. A fresh wet preparation, using a small drop of normal saline on a moderately warm slide and covered with a coverslip, is examined immediately. The rapidly moving flagella and undulating membrane are identifying factors.

A rough estimate of the ratio of pus cells to squamous cells in a saline-drop preparation gives a good index of the severity of infection and progress of therapy. For example, a pus:squame ratio of 0:10 signifies satisfactory progress, a healthy vaginal state, and a good prognosis. A pus:squame ratio of 8:2 is unfavorable.

When the patient is infected with the yeast fungus, *Candida albicans*, a flaky or glairy discharge appears, and vulvar itching may be extreme. Association with pregnancy and glycosuria is common. Appearance often suggests the diagnosis.

Double infection by monilia and *T. vaginalis* is not infrequent.

Pressor Effect of Intravenous Oxytocic

RICHARD L. JACKSON, M.D., AND DAVID G. DECKER, M.D.

INTRAVENOUS drip injection of a dilute solution of Pitocin may raise blood pressure of sensitive individuals to dangerously high levels. The agent is probably safe for induction of labor in women with hypertensive trends if used with adequate precautions, but the physician responsible for administration should be in continuous attendance, with counter measures immediately available. The pressor effects seem to result from an individual sensitivity.

In 6 of 8 cases studied by Richard L. Jackson, M.D., and David G. Decker, M.D., at the Mayo Clinic, Rochester, Minn., both systolic and diastolic pressures rose beyond usual expectation.

In most cases, 10 minims of Pitocin was added to 1,000 cc. of 5% glucose in distilled water. Rate of flow never exceeded 35 to 40 drops per minute. The total infusion was 40 to 1,000 cc. Blood pressures were recorded at five-minute intervals during injection and subsequently almost until return of initial values.

Pitocin was discontinued in a case of eclampsia after 2 unsuccessful trials because levels ascended to 290 mm. of mercury systolic and 170 diastolic. A preeclamptic patient had minor convulsions on the third attempt to induce labor with the drug.

Some observations on the pressor effect of an oxytocic agent used intravenously. Proc. Staff Meet., Mayo Clin. 28:20-24, 1953.

Males with pyuria, and females if infection persists or recurs, should have urinary tract examinations.

Pyuria in Children

JAMES MARVIN BATY, M.D.
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INFECTIONS of the urinary tract are relatively common among infants and children and, when uncomplicated, respond promptly to therapy.

The etiologic organism in most instances is one of the colon-typhoid group, usually *Escherichia coli*. The gram-positive cocci cause approximately 20% of cases. Mixed infection is found occasionally.

Bacterial invasion of the urinary tract occurs by the ascending urogenous route or by way of the blood stream, usually the former. Stasis of urine is a predisposing factor and the important cause of persistent and recurring infections.

Between 70 and 90% of the patients are females. The vagina becomes contaminated with organisms from the rectum, which easily ascend to the bladder in the short female urethra. Pyuria in males must be considered evidence of a congenital malformation until proved otherwise.

Sometimes no symptoms are noted or the onset may be abrupt with fever, vomiting, pallor, and, in infants, convulsions. Chills are more frequent than with other infections. Temperature elevation may be sustained but, more typically, the curve has wide swings. Digestive disorders may predominate.

The urine usually is acid and diminished in volume and contains ketone bodies, varying amounts of albumin, pus cells characteristically in clumps, and bacteria. Occasional red blood cells may be found. The white blood cell count is elevated.

Diagnosis can be made only from urinalysis. The organism is determined by cultures obtained by catheterization of females and by clean voided specimens from males. In cases of obscure fever, examination should be done several times because, in rare instances, pus does not appear in the urine until several days after onset.

During the acute febrile stage, the patient should be kept in bed and given a bland diet and large amounts of fluids. Sulfadiazine and Gantrisin are effective against most of the causative organisms. James Marvin Baty, M.D., suggests ½ to 1 gr. per pound of body weight every twenty-four hours in divided doses three or four times a day. The drug should be continued for several days after the urine has cleared; usually the course lasts seven to fourteen days. The antibiotics, alone or combined with sulfonamides, are more effective for some specific infections.

Pyuria in children. Nebraska State M. J. 37:293-296, 1952.

Acute pyuria in females can ordinarily be treated at home without any laboratory work except urinalysis.

However, [1] males with pyuria, [2] females with persistence or recurrence, and [3] youngsters with less specific symptoms such as recurrent abdominal pain and malnutrition should be hospitalized and the urinary tracts thoroughly investigated. Procedures such as intravenous and retrograde pyelograms, urethrograms, and blood chemistry should be done in an effort to discover remedial congenital malformations before irreparable damage has occurred. Infection should be cleared up as far as possible before tests are started.

Ferrous Sulfate Poisoning

LE ROY K. BRANCH, M.D.

INGESTION of large quantities of iron medication may cause fatal poisoning.

A child may seem perfectly well shortly after ingestion of the iron tablets and, once gastric lavage has been accomplished, the temptation is strong to send the child home without further therapy. However, in two or three hours, vomiting, hematemesis, frequent tarry stools, vasomotor collapse, and cyanosis may develop.

In all suspected cases, the stomach should be emptied immediately by emesis followed by gastric lavage with a bicarbonate solution to convert the iron to the less irritating ferrous carbonate and dilute the poison. Possibly the feeding of raw eggs, milk, or bismuth solution will help protect the mucosa.

Treatment of the vascular collapse with blood, plasma, or other fluid is essential. Profound shock is usually the immediate cause of death. All possible supportive measures, including oxygen, should be used.

LeRoy K. Branch, M.D., of the Desporte Clinic, Bogalusa, La., reports that a 29-month-old boy who accidentally ingested about 75 ferrous sulfate 0.3-gm. tablets died four and a half hours later in extreme shock, although the stomach was lavaged one-half hour after the ingestion. No further therapy was given.

Intense cyanosis of the head, shoulders, fingertips, and toes was found after death. Petechial hemorrhages appeared over the upper half of the body. Hemorrhagic, necrotizing gastroenteritis involved the stomach, small and large intestine, and even portions of the appendix. Submucosal venous thromboses with iron pigment deposition were seen in numerous areas of the stomach.

Ferrous sulfate poisoning. Pediatrics 10:677-680, 1952.

True overfeeding of a young baby is rare and probably never dangerous.

Overfeeding in Early Infancy

IAN G. WICKES, M.D.
North Middlesex Hospital, England

THE diagnosis of overfeeding is rarely justified in early infancy. In the few valid instances, the symptoms are seldom alarming.

Nevertheless, the diagnosis of overfeeding is still frequently made and is deeply rooted in pediatric tradition. Many modern textbooks state that overfeeding may lead to vomiting, diarrhea, loss of weight, and death. Yet no authentic case history can be found in the literature illustrating this unlikely sequence of events.

Self-demand feeding, allowing the baby to feed to repletion on a self-determined schedule rather than forcing prescribed amounts at set periods, is advocated as a rational infant feeding program. The leading objection to self-demand feeding is that overfeeding and morbidity may result. How often a diagnosis of overfeeding is valid, therefore, assumes practical importance.

Among more than 500 healthy infants under 2 months of age, Ian G. Wickes, M.D., reports that although an early presumptive diagnosis of overfeeding could be made in 14%, and suspected in an additional 12%, careful reevaluation confirmed the diagnosis for only 6 infants, 1%. None had serious symptoms. Only 1 infant given self-demand nourishment was overfed. The other 5, who were being forced fed, improved on self-demand regimes.

Faulty feeding, ignorance of the wide range of normal values for early infancy, and underfeeding are chiefly responsible for the misdiagnosis of overfeeding. Restlessness, frequent green stools, crying, vomiting, and failure to gain weight are common symptoms of both underfeeding and overfeeding. Unsatisfied hunger may lead to marasmus and death, but no evidence can be found that true overfeeding does. When the above symptoms appear, the logical approach is diet manipulation under careful management to eliminate the possibility of either under- or overfeeding.

The generally accepted rate of gain of 1 oz. or less daily underestimates the ability of the average young baby to grow. One major diagnostic error lies in regarding this rate of gain as optimal rather than average, thereby considering a greater weight gain as evidence of overfeeding.

Likewise, the orthodox feeding formula of 50 calories per pound of expected body weight attempts to level all infants down to a stand-

Overfeeding in early infancy. Brit. M. J. 4795:1178-1180, 1952.

ard rate of gain. The baby is ignored who, because of defective absorption or wasteful metabolism, requires a larger intake. Hungry babies, being fed the so-called correct amount, are often thought to be crying because of discomfort from an overloaded stomach rather than from the pangs of unsatisfied hunger.

Crying and colic are common in the first three months of life and very rarely are the result of overfeeding. In most instances, colic may be traced to an unsatisfied sucking urge and the infant can be satisfied with a pacifier.

Vomiting and frequent stools may be symptoms of a serious organic disorder or of underfeeding or simply normal variations. Careful clinical differentiation must be made. Often, the tendency is to blame overfeeding, but this snap diagnosis must not be allowed to obscure the true diagnosis should the infant actually have an organic disease.

Immediate Circumcision of the Newborn

RICHARD L. MILLER, M.D., AND DONALD C. SNYDER, M.D.

THE best time to circumcise a healthy, full-term baby boy is just after birth. The mother signs a permit on admission to the labor room, and the physician operates on completion of delivery.

In one year, 1,480 immediate circumcisions were done in Akron City Hospital with no detriment to infants' weight curves, temperature, feeding, healing process, or general well-being. Data were reviewed by Richard L. Miller, M.D., and Donald C. Snyder, M.D.

Including other hospitals in the city, 250 physicians performed about 30,000 similar procedures in eleven years, and 97.5% of those questioned endorsed the method.

The prepuce is excised to correct phimosis, improve cleanliness, and reduce likelihood of venereal infection and cancer of the penis. Operation is not advisable for debilitated infants and children of Rh-negative multiparous mothers.

Surgery may be done without gloves, using a dorsal slit and Goldstein clamp. Postoperative bleeding is very unusual and easily checked by suture or Gelfoam. Infection has not occurred, and incisions heal in thirty-six to forty-eight hours.

Results may be superior to those of delayed operation. Bleeding and clotting times lengthen slightly from birth until the fifth day of life. Newborn infants have 19 to 23 gm. of hemoglobin, white cell count of 15,000 to 25,000, and maternal antibodies that are soon lost.

Immediate circumcision of the newborn male. Am. J. Obst. & Gynec. 65:1-11, 1953.

An inherited tendency is likely if febrile convulsions appear in a child under 3.

Febrile Convulsions

M. G. PETERMAN, M.D.
Milwaukee County General Hospital

ONE of the most serious symptoms in childhood is a febrile convulsion. Immediate investigation is always imperative.

About 74% of children with such convulsions have abnormal electroencephalograms that suggest an organic brain disease. Thorough study will reveal the basic cause or the diagnosis in about half the cases.

The greatest aid in diagnosis, prognosis, and evaluation of treatment is the electroencephalogram.

Febrile convulsions are therefore defined by M. G. Peterman, M.D., as major seizures, with loss of consciousness, precipitated by a nonspecific fever of variable degree in a child with a potential convulsive disorder. The fever accelerates the metabolism causing a convulsion in an individual with a low convulsive threshold.

Such seizures are never seen in a normal child but do occur in about 2% of sick children. Almost half of all convulsions of childhood appear between the ages of 6 months and 3 years.

The sequence of events is important in differentiation between febrile convulsions and convulsions occurring in the course of infectious diseases, such as septicemia, or invasion of the central nervous system, as in meningitis. With febrile convulsions, the fever precedes and rapidly precipitates the convulsion, usually in a child less than 3 years old. With infectious diseases, the convulsion ordinarily precedes or accompanies the rise in temperature and may occur at any age.

Children with idiopathic epilepsy in whom fever acts as a trigger mechanism in the precipitation of the initial seizure have one or more of the following:

1] Prolonged convulsions, over one-half hour
2] Focal convulsions
3] Family history of convulsions. This appears in almost half the cases, indicating a hereditary trend of about the same order as for diabetes.
4] Specific electroencephalographic abnormalities, including the typical cerebral dysrhythmia of petit or grand mal epilepsy, the scattered spikes of brain injury residue, and the slow waves of chronic encephalitis.

When possible, treatment should be specific rather than symptomatic. For immediate therapy, sodium phenobarbital is given subcutaneously, intramuscularly, or intravenously every six hours until the desired effect is obtained. If not effective, magnesium sulfate is tried by mouth or rectum in 50% solution, or intramuscularly in 25 to

Febrile convulsions. J. Pediat. 41:536-540, 1952.

50% solution, or intravenously, *slowly*, in 20 to 25% solution. Other alternatives are paraldehyde or chloral hydrate.

Oxygen should be used when the convulsion is prolonged. If these measures fail, more heroic means that may be tried include chloroform, vinyl ether, Avertin, and spinal fluid drainage with air replacement.

When a definitive diagnosis can be established, the patient should be given regular anticonvulsant medication. Until then, close observation is advised so that specific medication can be started when new studies establish the etiology.

Diagnosis of Psychogenic Megacolon

STERLING D. GARRARD, M.D., AND JULIUS B. RICHMOND, M.D.

Now that surgical intervention is becoming increasingly successful in the therapy of neurogenic and anatomic megacolon, the differentiation of these disorders from psychogenic megacolon is important to assure that needless and perhaps harmful surgery is avoided.

To establish the diagnosis of psychogenic megacolon, no detailed psychiatric history is necessary, state Sterling D. Garrard, M.D., of the Miami Valley Hospital, Dayton, Ohio, and Julius B. Richmond, M.D., of the University of Illinois, Chicago. The condition can be identified from the following: fecal soiling, onset in the second year of life or later, infrequent use of the toilet for defecation, defecation in the standing or supine position, inhibition of the stool, periodic voluminous stools, no episodes of intestinal obstruction, a feces-packed rectum, and no spastic segment of rectum or rectosigmoid revealed by Neuhauser's fluoroscopic technic.

Neurogenic megacolon, by contrast, is associated with: constipation without fecal soiling, onset at birth or in the first few weeks of life, use of the toilet for defecation, defecation in the sitting position, pellet- or ribbon-like stools, frequent episodes of intestinal obstruction, an empty rectum, and a spastic segment of rectum or rectosigmoid shown by Neuhauser's technic.

The patient with the psychosomatic disorder has usually had coercive bowel training, whereas training has been noncoercive in the neurogenic case. The mortality is high among the neurologic patients if no treatment is instituted and negligible among the untreated psychiatric group. Removal of the involved segment usually brings improvement of symptoms with the neurogenic disorder, but such surgery causes no improvement or worsens the symptoms in the other type.

Psychogenic megacolon manifested by fecal soiling. Pediatrics 10:474-483, 1952.

Remedial measures can be instituted in time if warning signs are heeded on the first day of life.

The First Day of Life

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THE greatest hazard to survival during the first year of life comes on the first day. In the past quarter century, the remarkable decrease in the mortality rate of the initial year of life has not been paralleled by a similar decrease in the first twenty-four hours. To reduce the number of deaths during this critical period is a major problem.

Carl C. Fischer, M.D., points out that the solution lies with the individual physician. Keen observation, recognition and therapy of anatomic and physiologic abnormalities, and the often overlooked art of intelligent neglect are essential. Overenergetic therapy during the first few hours may be fatal.

Antenatal factors greatly influence the chances of survival. Prematurity, asphyxia and atelectasis, birth injuries, and congenital malformations, in that order, are the leading causes of neonatal death. Adequate maternal nutrition, prevention or correction of maternal infections, and careful delivery with as little interference as possible and without excessive analgesia or anesthesia are the obstetrician's contribution toward lowering neonatal mortality.

Once independent life begins, the establishment of respiration assumes first importance. Provision of an adequate airway by postural drainage and gentle suction is usually all that is needed. Oxygen, 100%, should be available.

If the respiratory reflexes are damaged or impaired, resuscitation may be required. Gentleness is essential. Since the newborn can safely survive ten or even fifteen minutes without breathing, time may be taken for careful, atraumatic procedures such as use of a laryngoscope, tracheal suction, and, with an unobstructed airway, cautious mechanical resuscitation. Alpha-lobeline or coramine sometimes initiates an inspiratory gasp after apnea, but the effect is short-lived and other conditions must be favorable for continuance of breathing. Cautious use of mouth-to-mouth insufflation may be lifesaving.

After a brief but careful inspection for bleeding points, jaundice, enlarged liver or spleen, heart murmurs, congenital malformations, and other lesions, the infant should be placed in a warm, humid atmosphere, preferably in a moderate Trendelenburg position, with oxygen available. The eyes are treated with required prophylaxis.

Later, but within twenty-four

The first day of life. M. Clin. North America 36:1561-1570, 1952.

hours of birth, a complete and careful physical examination is essential. Use of a regular routine form, or check list, despite obvious drawbacks, is recommended.

If defects in the heart and lungs are suspected, roentgenograms of the chest should be made. Both anteroposterior and lateral films are made as well as a fluoroscopic study, preferably with a barium or Lipiodol swallow.

A plain film of the abdomen, without contrast media, will be helpful in cases of possible bowel obstruction. If tumor is likely, a plain film, with contrast studies later, is employed. Roentgenograms of the bones may be needed in cases of possible trauma or malformations.

An immediate hematologic study may be advisable for anemia, jaundice, or possible infection. The red cell count in the newly born is about 4.5 to 6 million and a white cell count of 30,000 to 45,000 is within normal limits. The number of erythroblasts, the Coombs test, and the serum bilirubin aid in evaluating jaundice.

Continued intelligent observation throughout the neonatal period is mandatory. Especially important are such symptoms as respiratory difficulty, cyanosis during or between feedings, bleeding, jaundice, vomiting, and abnormal urinations and bowel movements.

Special care is necessary for infants of diabetic mothers, postmature infants, and those born by cesarean section. All have a predilection to respiratory difficulty. Special measures should include frequent nasopharyngeal suction and stomach aspiration every two or three hours the first day.

Mumps Orchitis in Infancy

NEVILLE K. CONNOLLY, M.D.

UNEXPLAINED acute swelling of the testicle in an infant, with or without involvement of the epididymis, and with edema of the scrotal skin, may often be due to the mumps virus.

Neville K. Connolly, M.D., of the Hospital for Sick Children, London, reports mumps orchitis without parotitis in a 7-month-old infant.

The differentiation from torsion is not easy. Diagnosis can be made with certainty only by demonstrating rising antibody titers with complement-fixation tests of the patient's serum. All questionable acute scrotal swellings should be explored by operation, without waiting for results of the serologic tests.

In severe cases, drainage by opening the tunica vaginalis relieves symptoms and brings temperature down.

Mumps orchitis without parotitis in infants. Lancet 264:69-70, 1953.

When the parents understand the nature of a child's migraine or tension headache, improvement may occur.

Chronic Headache in Children

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PSYCHOLOGIC factors are important in the pathogenesis of migraine and tension headaches in children. Prophylactic therapy is necessary. A modification of parental attitudes may be the most effective means of reducing the frequency of attacks.

George R. Krupp, M.D., and Arnold P. Friedman, M.D., studied 100 children between 3 and 14 years of age who had chronic recurrent headaches which limited activities; 75 had migraine, 17 had tension headaches.

MIGRAINE

The symptoms of migraine are explained on a vascular basis. Initial vasoconstriction of cerebral arteries produces preheadache phenomena. The prodromal period is followed by dilatation and distention of cranial arteries which presumably cause the headache.

About 35% of children with migraine have headaches before the fourth year of age. Incidence in the two sexes is the same. Headaches occur in 85% of the parents, and 70% have classical migraine.

The syndrome with children is less severe and abdominal disorders are more prominent than with adults. In some cases the typical syndrome is not present at first but develops later.

Headaches are preceded in 40% of cases by gastric, psychologic, or visual symptoms. As the patients grow older, throbbing and unilateral pain are more often described. Most headaches are frontal, temporal, and retroorbital. Associated with the headache are gastrointestinal disturbances, photophobia, and autonomic disturbances such as chills, sweating, and pallor.

Precipitating factors are not always known. Fear of failure, disappointment, rejection, fatigue, unusual stimulation, crying, and other stress situations are usually the principal exciting causes. Most of the children are of superior intelligence, take responsibilities seriously, desire approval, and have predispositions to sensitivity, cleanliness, and thoroughness.

Despite good performances, feelings of inadequacy, excessive guilt, and a strong superego are common. The inhibition of aggressive thought and actions is frequent.

Recurrent headache in children: a study of 100 clinic cases. New York State J. Med. 53:43-46, 1953.

Most of the children have psychogenic symptoms such as nail-biting, thumb-sucking, and enuresis.

Symptomatic treatment must be adjusted to individual requirements. Aspirin, if used early, sometimes gives relief. A combination of 1 mg. of ergotamine tartrate and 100 mg. of caffeine, taken in the prodromal phase, is effective in 85% of cases.

An initial dose of 1 tablet is administered, with additional doses of 1 tablet at thirty-minute intervals if relief is not obtained in half an hour. The maximum dose is 4 tablets. The effective dosage, if 2 or 3 tablets, may be given in entirety at the start of the next attack. For young children 1 tablet is usually sufficient.

Side effects of therapy, such as increased nausea, tremor, and dizziness, may occur. Smaller doses and suppositories may have to be employed to eliminate these reactions. Belladonna alkaloids may be useful.

The prognosis with migraine in children is generally poor. Prophylactic therapy is important in reducing the frequency and severity of attacks. Parents must understand the child's problems and learn not to be anxious or pay excessive attention and should minimize their own headaches.

Psychotherapy is suggested in some cases, particularly when neurotic symptoms are outstanding and headaches are severe and frequent.

TENSION HEADACHE

The tension headache is a psychosomatic symptom involving the autonomic nervous system and cranial muscles.

Headaches tend to be slight, bilateral, aching, irregular in frequency, and with no prodrome. An attack may last for long periods. The precipitating and personality factors are essentially the same as those of children with migraine.

The management of tension headache is not significantly different from that of migraine. Salicylates, however, can often replace ergotamine tartrate and caffeine for symptomatic relief.

¶ STING RAY ATTACKS produce wounds requiring incision and suction to promote bleeding and destroy venom. Bruce W. Halstead, M.D., and Norman C. Bunker, M.D., of the College of Medical Evangelists, Loma Linda, Calif., advise debridement, irrigation with 0.01% (1: 10,000) solution of potassium permanganate, application of hot fomentations, and soaking of the limb in hot magnesium sulfate solution. If the laceration is deep, a small drain should be left in for a day or so. Infiltration of the area with 0.5 to 2% procaine relieves the pain; occasionally opiates and barbiturates are needed. As secondary bacterial infection is common, prophylactic antibiotics and tetanus antitoxin should be given. Cardiac stimulants and other supportive therapy may be necessary in event of primary shock.

Am. J. Trop. Med. & Hyg. 2:115-128, 1953.

Exact site of nasal bleeding and the proper therapy are best determined by a methodical approach.

Management of Nasal Hemorrhage

HENRY H. BEINFIELD, M.D.
Long Island College Hospital, Brooklyn

CAREFUL location and treatment of spontaneous nosebleed may avert an emergency requiring ligation of the external carotid artery.

As a rule nasal hemorrhage is not severe but treatment can be troublesome and difficult. If not properly managed the condition can become annoying to the physician and occasionally may have serious consequences for the patient.

Satisfactory control of bleeding can usually be achieved if a systematic and definite plan is carefully carried out.

Methodical plans for anterior and posterior nasal hemorrhage are outlined by Henry H. Beinfield, M. D. Mucous membrane should always be anesthetized before treatment. Packing is inserted under direct vision, using a speculum and proper light, with caution against injury by bayonet forceps. Intractable flow may be controlled by submucous resection.

Anterior nosebleed usually affects children and originates in Little's area, a vascular plexus on each side of the septum just behind the cartilage. Blood flow is frequently slight and may cease without aid, only to recur.

Posterior nosebleed, a more severe and persistent form, occurs chiefly in adults with hypertension, arteriosclerosis, or cardiovascular disease, after rupture of the sphenopalatine artery.

DIAGNOSIS

The patient should bend the head forward so that the severity of the bleeding can be judged. Unless flow is profuse, the site of hemorrhage should be determined before therapy.

The patient should be asked where blood was first noted. Anterior bleeding always appears initially from the right or left nostril, posterior bleeding in the throat or mouth, but either type may overflow to other parts.

Active anterior nosebleed is readily located if all clots are removed by nose-blowing or aspiration with a suction tip. If bleeding has stopped, the clot may be found. Coagulum difficult to see should be rubbed off, and fresh flow started by a cotton applicator dipped into 2% tetracaine hydrochloride or 10% cocaine solution and passed over Little's area.

In case of posterior nosebleed, mouth and throat are examined, and nasal tissues are cleaned and shrunk with epinephrine. A bleed-

General principles in treatment of nasal hemorrhage. Arch. Otolaryng. 57:51-59, 1953.

ing point may be seen between the septum and middle turbinate area or blood may come from posterior varicosities on the nasal floor.

If neither anterior nor posterior site is evident, dry cotton is placed in different parts of the nose and inspected for bloodstains.

TREATMENT

For *anterior hemorrhage,* tissues are anesthetized by a cotton pledget moistened with tetracaine hydrochloride. If, when the cotton is removed, blood still flows, the source is quickly viewed, and 1:1,000 epinephrine is applied. The dry site is cauterized lightly with a chromic acid bead, made by fusing an acid crystal on heated wire.

When blood literally pours out, the nose is packed immediately, but to prevent slipping down, the dressing should not extend more than halfway back between anterior and posterior nares. After twenty-four hours or more, the bleeding point is located and cauterized.

Hemorrhage may be controlled by other methods, such as thrombin, absorbable gelatin sponge, electrocoagulation, or sclerosing injections.

Slight *posterior nosebleed* between the middle turbinate and a fairly straight septum may be checked by plain gauze moistened with epinephrine and pushed back over the ruptured vessel against the front sphenoid wall. Packing may remain for a week.

If the septum deviates, leaving no room for packing as described, or bleeding is relatively severe, a postnasal pack of some type should be inserted at once. The dressing is secured with 2 strong linen strings brought out through the nostril and tied over a piece of bandage. A third string left hanging to a level just below the soft palate is used to remove the pack through the mouth a day or two later; a longer string may be pulled by the patient and dislodge the pack. Use of penicillin or other antibiotic drug will prevent infection around the eustachian tube because of the pack.

To halt posterior bleeding from the nasal floor, the inferior turbinate is fractured toward the septum, creating space for a gauze pack under the turbinate at the rear. Additional pressure is supplied by another firm gauze pack placed on the floor posteriorly between the septum and the inferior turbinate.

If postnasal hemorrhage is obviously unmanageable from the outset or continues after twenty-four hours of packing, submucous resection is generally effective.

With the postnasal pack in place, both sides of the nose are anesthetized by cotton wet with 10% cocaine and 1:1,000 epinephrine, and the mucous membrane is infiltrated with a 1.5% solution of butethamine hydrochloride and 1:30,000 epinephrine. The postnasal pack is then removed, and surgery is begun in a bloodless field.

Septal flaps are elevated, and the bony septum may be totally excised. When flaps are united as a membranous wall, the bleeding vessel may retract or thrombose more readily than with rigid bone. The postoperative regimen includes bed rest and sedatives.

Accessibility of the affected part in nasal allergy offers particular advantages for successful treatment.

Sodium Psylliate for Nasal Allergy

JOHN H. CHILDREY, M.D.
Santa Clara County Hospital, San Jose, Calif.

THE long periods of relief obtained and the ease of administration make sodium psylliate injections particularly advantageous for treating nasal and paranasal allergic conditions.

John H. Childrey, M.D., describes results with 900 patients so treated. In many cases the mucosa of the septum and middle turbinates as well as that of the inferior turbinates must be injected. Treatment must be conservative to prevent sloughing of the mucosa.

Allergic conditions are among the most common in otolaryngologic practice. Some cases are seasonal, others are perennial. Usually the symptoms are of long duration, and history of a familial allergy is common.

The history is an important guide to diagnosis and treatment. The most common symptoms in order of frequency are nasal obstruction, postnasal and nasal discharge, throat discomfort, asthma, headache usually associated with nasal obstruction, vasomotor symptoms referred to the eye, stuffiness of the ears, and other aural symptoms.

Nasal obstruction is often associated with sneezing, itching of the nose, and watery nasal discharge and is usually worse indoors and when the individual lies down. Not infrequently when the patient has septal spurs or deviations of the nasal septum, the objectively more open side of the nose gives more trouble and is more often obstructed, indicating the importance of vasomotor irritability of the mucosa rather than septal deformities in causing the obstruction.

Inspection reveals the nasal mucosa as boggy, pale, and sufficiently swollen to produce obstructive symptoms. In longstanding cases, polyps are not uncommon. Smears of nasal mucus show about 10% eosinophils, but the presence of eosinophils is not diagnostic.

Roentgenograms often reveal thickened mucosa in the antra and both groups of ethmoid sinuses. Although pus is sometimes obtained by irrigating the antra, surgery is usually unnecessary when allergy is the chief etiologic factor.

To relieve the irritated, boggy condition of the nasal mucosa, usually seen over the inferior turbinates, injections of a 5% solution of sodium psylliate are made into swollen and affected areas. For allergic children the injections are made after the child has received

Treatment of hay fever, vasomotor rhinitis and vasomotor sinusitis with sodium psylliate—900 cases. Laryngoscope 62:1352-1358, 1952.

general anesthesia, frequently at the time of tonsil and adenoid removal. For adults, local anesthesia with 2% pontocaine applied topically is adequate.

To decrease posttreatment discomfort, the sodium psylliate is usually mixed with 1 to 4% procaine in a proportion of 3 or 4 parts of psylliate to 1 part of procaine. The total solution injected is usually about 0.23 cc. to one side of the septum, 0.08 cc. to the middle turbinate of one side, and 1.87 cc. to the inferior turbinate of one side.

Care is taken to avoid injecting the solution into a blood vessel. Olfactory areas are avoided.

Some relief of symptoms can be expected two or three weeks after the intranasal treatment. Within a few months the mucosa is firm, pink, and of ordinary thickness, lying snugly against the bone of the underlying turbinate and without ulceration, crusts, scabs, or atrophic areas. Relief may last from two to seven years. Re-treatment may achieve further respite from the nasal allergy.

The sense of smell is not impaired and anosmia may be corrected in adults. Children with conduction deafness often have improved hearing.

Persons with severe asthma or unstable nervous systems are unsuitable for sodium psylliate treatment.

Typhoid Vaccine and the Adrenals

DAVID A. ROSEN, M.D.

MATERIALS with fever-producing properties have long been used in medical therapeutics. All the injection fevers, whether caused by vaccines, proteins, or salts, are due to a common heat-stable pyrogenic factor that can pass through bacterial filters. The active bacterial product producing the fever is apparently a polysaccharide. The gram-negative bacilli are the most reliable producers of pyrogen material.

Numerous theories have been proposed to explain the beneficial effects of pyrogenic substances on ocular diseases. On the basis of changes in the 17-ketosteroid and 11-oxysteroid excretion and the eosinophil response among 6 patients given intravenous typhoid-paratyphoid vaccine for various ophthalmic conditions, David A. Rosen, M.D., of Johns Hopkins Hospital, Baltimore, concludes that, in addition to other effects on the organism, typhoid vaccine and allied pyrogens activate the adrenal cortex. Thus, stimulation of the adrenal cortex may be responsible for the therapeutic effect of foreign proteins.

The effect of intravenous typhoid vaccine on adrenal cortex function. Am. J. Ophth. 35:1783-1790, 1952.

Excellent results may be achieved by greenstick osteotomy without casts or increased risk of complications.

Greenstick Osteotomy Bunionectomy

J. HOWARD VARNEY, M.D., JOHN K. COKER, M.D., AND JOHN J. CAWLEY, M.D.
Kern General Hospital, Bakersfield, Calif.

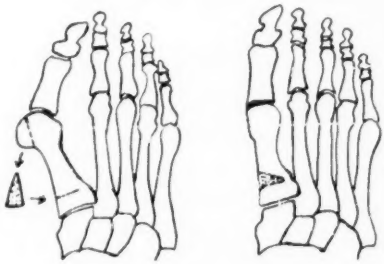
THE metatarsus primus varus accompanying hallux valgus can be easily corrected during bunionectomy by employing the removed exostosis as a wedge. The wedge, which is placed in a defect at the metatarsal base made by means of osteotome and greenstick fracturing, prevents recurrence of splay foot.

J. Howard Varney, M.D., John K. Coker, M.D., and John J. Cawley, M.D., extend the usual superior incision made over the first metatarsophalangeal joint to within ⅜ in. of the metatarsal base. The capsule is exposed and the usual elliptic flap of capsule and thickened bursa is made, with attachment distally on the proximal phalanx.

The joint is exposed. Bunion overgrowth at the head of the metatarsal is removed with a sharp osteotome from before backward. If inspection of the joint reveals erosion of the articular cartilage of the metatarsal head and arthritis, the base of the proximal phalanx is excised. When no erosion or arthritis is noted, traction is made on the big toe while that digit is depressed and abducted.

The capsule and adductor tendon are severed through the same incision or under direct vision through a separate incision by passing a thin, sharp scalpel across the joint. The toe will then line up with the metatarsal without tension.

After removal of the bunion, the exostosis is cleaned, denuded of cartilage, and made into a wedge. With a sharp osteotome the inner two-thirds of the metatarsal base is cut about ⅜ in. from the joint.



Before and after surgery

The metatarsal necks are grasped and squeezed firmly together with one hand, while the operator pries lightly with the osteotome to cause a greenstick fracture of the base with the other hand. The wedge is driven firmly into the gap with a

Bunion treatment by greenstick osteotomy, metatarsal base. West. J. Surg. 61:36-38, 1953.

punch until smooth with the surface. The metatarsus primus varus is then nicely corrected. The bursocapsular flap is plicated to hold the toe in direct line with the first metatarsal.

Periosteum and skin are closed and a light pressure bandage, with stockinette cut on the bias, is fixed with adhesive tape to hold the toe in proper position. No cast is necessary.

Weight bearing is commenced on the outer border of the foot a few days postoperatively. Normal foot position is gradually assumed within two or three weeks. Sutures are removed in ten days, when a padded tongue-blade splint is applied with straps to hold the metatarsophalangeal joint in corrected position. The splint is worn day and night for three weeks, then as a night splint only.

The greenstick osteotomy heals readily and causes no more pain than the regular bunionectomy after the first four days. A full fracture gives as satisfactory results as does a greenstick break and with no more pain or disability.

The hallux valgus remains permanently corrected, and the foot does not spread.

Scoliosis Caused by Spinal Cord Tumor

F. L. LAWSON, M.D.

TERATOID involvement of the vertebral column must be considered in the differential diagnosis of congenital scoliosis, though the occurrence is extremely rare. The growth may arise primarily in the nervous tissue of the spinal cord or may start intrathoracically and involve the vertebral structures by extension. The tumor mass, arising in a bony defect such as a spina bifida, may be erroneously diagnosed as meningocele.

F. L. Lawson, M.D., of Kingston, Ont., reports that, in autopsy study of 2 children with scoliosis, large teratoid growths were found to be intrathoracic in location but communicating with the spinal cords. A 3-year-old child had extensive involvement of the spinal cord yet with little neurologic deficit. The spine was folded upon itself at the level of the thoracolumbar junction, yet the child had walked and run with only slight tendency to fall to the right.

In a 3-month-old infant, only slight scoliosis was reported, the teratoma being mainly intrathoracic. Histologic study showed that the growth had arisen from the spinal arachnoid, to which the tumor was connected by a narrow pedicle.

Lipomatous masses in spina bifidas are not uncommon and a temporal relationship between these lipomas and teratomas is suggested.

Paravertebral teratoid tumor with scoliosis. J.A.M.A. 151:271-275, 1953.

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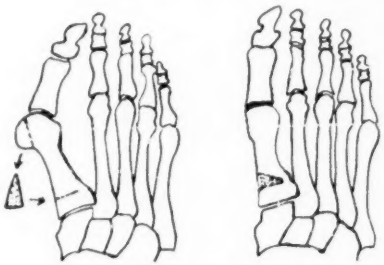

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The preservation of function immediately after fracture is a great asset of finger or hand pinning.

Intramedullary Fixation of Hand Fractures

FREDERICK H. VOM SAAL, M.D.
New York Hospital, New York City

WHEN pinning is employed to repair finger or hand fractures, the hand may be used freely and rehabilitation is unnecessary.

The technic provides adequate fixation for selected fractures and reconstructive surgery and does not delay healing. Since function is preserved, loss of income is reduced, especially for self-employed patients.

With simple fractures of the hand or fingers, union and alignment can usually be obtained without operation. Intramedullary pinning may be utilized, however, if the fracture is displaced or if the hand must be used immediately.

Pinning is also applicable for osteotomies, repair of nonunion, bone-graft fixation, joint fusions, reposition of amputated fingertips, and splinting for extensor-tendon avulsions. Compound fractures may be pinned if the wound can be made surgically clean within four hours of the injury.

Severely comminuted fractures should not be pinned nor should the procedure be applied in cases with furuncles, blisters, loss of skin, or general sepsis. Oblique fractures cannot be fixed by this method, since the pin is not large enough to fill the phalangeal canal and the fracture fragments will slide until the opposite sides impinge against the pin. Most thumb fractures are too comminuted for pinning and the medullary canal is usually too wide for adequate fixation by a wire.

For fixation of amputated fingertips, Frederick H. Vom Saal, M.D., inserts a needle from the fingertip to the base of the distal phalanx. The needle can be removed in three to four weeks.

For middle and proximal phalangeal fractures, a 0.045 or 0.062 Kirschner wire or a pin is inserted from the distal end of the involved phalanx through the middle of the extensor-tendon sleeve at the joint edge. An arm or finger tourniquet is used.

The joint is flexed to 90° to allow finger flexion postoperatively and to facilitate reduction. Position is verified by roentgenograms. Closed insertion is done for most fresh fractures, open reduction for old breaks.

The end of the wire protruding through the skin is bent to a right angle to prevent joint penetration. Wires are removed in four to seven weeks, and full extension is ordi-

Intermedullary fixation in fractures of the hand and fingers. J. Bone & Joint Surg. 35-A:5-16, 1953.

narily regained during the next two to three weeks. Use of the hand is encouraged immediately after surgery.

After joint resection and bone grafting in interphalangeal joint fusion or carpometacarpal arthrodesis, pinning provides excellent fixation and allows function of the rest of the hand while union is being achieved.

Pin fixation is useful after repair of complete tendon avulsions. The wire is inserted through a small incision into the dorsum of the proximal end of the distal phalanx at the joint line and is drilled out the finger end. The drill is then placed on the opposite end of the pin, with the finger hyperextended and the proximal phalanx at right angles. The wire is drilled into the middle phalanx and on into the bony proximal phalanx. The extensor mechanism is approximated with 2 fine silk mattress sutures. The pin is removed in about four weeks.

Simple metacarpal fractures can be blindly reduced and pinned, but if the fractures are at all comminuted or multiple, open reduction is simpler. During open reduction, the pin is inserted into the distal fragment from the fracture site. The wire must come out the radial side of the dorsal surface of the metacarpal head and be inserted with the metacarpophalangeal joint in full flexion to avoid the greater part of the extensor-tendon mechanism and to allow full flexion postoperatively.

The pins in multiple metacarpal fractures must extend into cancellous bone in the metacarpal base. If the fracture is near the base, the pin should go through and into the adjacent carpal bone.

A similar procedure can be applied to simple fractures of the metacarpal of adults and also of children, if an epiphysis is open when the fracture occurs. A Kirschner wire of 0.032 or 0.045 is used for children. Pinning may also be done in conjunction with other methods of treatment, such as traction.

¶ REHABILITATION OF HEMIPLEGIC patients may be facilitated by oral administration of cortisone. When the substance is given in dosage of 200 mg. for two days, then progressively diminished to a maintenance amount of 50 mg. daily through the third week, Henry I. Russek, M.D., of U. S. Public Health Service Hospital, Staten Island, and associates find striking increase in the sense of well-being, improvement in motivation, and diminution of pain. Among 18 subjects treated, an accelerated rate of gain in functional capacity occurred in 6 receiving the drug 3.5 to 17.3 months after cerebrovascular accidents. In properly selected cases the hormone has no significant effect on the electrocardiogram, hemogram, or blood pressure and does not appear to induce thromboembolic phenomena.

Am. J. M. Sc. 225:147-152, 1953.

A device is described to administer an oxygen-rich aerosol mixture to respirator patients.

Apparatus for Aerosol after Tracheotomy

ROBERT DENTON, M.D.
Children's Hospital of the East Bay, Oakland, Calif.
JOSEPH N. SCHAEFFER, M.D.
Sheppard Air Force Base, Tex.

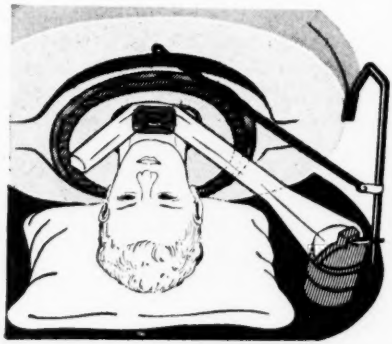
HUMIDIFICATION of inspired air through a tracheotomy tube prevents drying of bronchial membranes and patchy atelectasis for respirator patients.

In the hospital at Sheppard Air Force Base, Tex., a rigid transparent plastic device is employed to conduct oxygen-aerosol from an atomizer to the tracheotomy opening in the throat. The supersaturated gas mixture deposits microscopic particles of water on the mucous membranes and prevents inspissation of mucus with consequent obstruction of bronchi and patchy atelectasis.

The device has been satisfactorily employed to avoid or relieve pulmonary complications in 10 cases, report Robert Denton, M.D., and Lt. Col. Joseph N. Schaeffer, M.C., U.S.A.F.

A supersaturated oxygen-rich atmosphere is provided by a Mist-O_2-Gen nebulizer attached to the tank respirator with a bracket. The conductor is made of plexiglas with a conical inlet tapering to a 1¼-in. tube that curves to fit the space between chin and respirator collar.

The cone adapter is slipped over 2 mounting pins on the atomizer. The tube contains an oval hole in the lower curved surface. A surrounding ½-in. collar and sponge rubber ring extend to the patient's neck around the flange of the tracheotomy tube, which is adequate for the patient's respiratory demand.



The device is entirely supported by the nebulizer and can be removed instantly with a single motion. The humidified gas flows at the rate of 4 to 8 liters per minute. Speed of flow, type of respiration, and patency of the tracheotomy tube are observed with ease.

Continuous oxygen-aerosol for the tracheotomized respirator patient. Arch. Phys. Med. 33:727-731, 1952.

Therapy should not be started for ringworm until microscopic preparations and cultures have verified diagnosis.

Diagnosis of Ringworm on Hands and Feet

JAMES HERBERT MITCHELL, M.D.
University of Illinois, Chicago

REGARDLESS of cause, many eruptions on hands and feet are now diagnosed as ringworm, including contact dermatitis, psoriasis, and even dangerous streptococcic infections.

Wrong treatment may change minor lesions to a state requiring hospital care. In other cases, strong fungicides cause permanent damage.

True ringworm has a number of distinctive features, including unequal bilateral spread and limitation to soles or palms, in most instances. Before therapy, however, James Herbert Mitchell, M.D., confirms the diagnosis with careful microscopic examination and cultures. Elastic fibers of skin should not be mistaken for fungi.

Infection is commonly caused by *Epidermophyton floccosum* or a form of *Trichophyton gypseum*, once called *E. interdigitale*. Though often reported to occur only singly, both organisms may be found.

Ordinary ringworm generally affects both hands or feet but is much more extensive on 1 side. Though dorsi are rarely involved, eruption on backs of the hands may be confused with overtreatment dermatitis.

Deep-seated vesicles appear in clusters, especially in hot humid weather. Contents are finally absorbed, leaving brownish tops. Characteristically, vesicles are seen in all stages of evolution and involution at the same time.

Skin between fingers or toes is often chronically macerated and fissured. On hands constantly in water, *E. floccosum* causes washerwoman's itch, particularly at bases of third and fourth fingers.

Drug eruptions are common, yet the majority occur symmetrically on extremities, and vesicles are in the same phase at a particular time. Psoriasis may be identified by equal distribution of lesions and associated arthropathy.

Trichophyton rubrum, a fungus hard to recognize and eradicate, produces symmetric scaly lesions, little erythema, and, usually, no vesiculation. Rash may cover the body except for islands of normal skin.

Monilia (Candida) erodes the third interspace web on both hands and seldom infects dorsum or palm. However, chronic paronychia with red bolster-like swelling may develop, followed by invasion of nails.

Bacterids are minute superficial sterile pustules at bases of both palms or soles. Outbreak is often

Ringworm of the hands and feet. Postgrad. Med. 12:509-516, 1952.

related to chronic focal infection, which should be eliminated.

When ringworm is suspected, roofs of fresh or dried vesicles should be examined. Material is put on a glass slide, covered with 15% sodium hydroxide solution, heated gently, and pressed thin under the cover slip. If preferred, McManus stain may be applied to reveal fungous cellulose under low power magnification.

A pure culture is usually obtained from vesicle contents. Lesions without vesicles are cleansed by alcohol, and scales are planted on the medium surface. Sabouraud's culture media are available commercially or easily prepared.

Microscopically, material infected with *E. floccosum* or *T. gypseum* shows mycelia without spores.

In culture on proof medium, *E. floccosum* is lemon yellow, and a photomicrograph reveals typical fruitlike bodies. Colonies of *T. rubrum* have a port-wine color. *Monilia* is readily demonstrated by microscope and culture; sodium hydroxide preparations show both mycelia and free spores.

In treatment of supposed ringworm, several compounds may produce severe dermatitis. Butesin Picrate is a sensitizer of the worst kind, though tolerated by some individuals. All fatty acid preparations are extremely unsatisfactory.

Formaldehyde should be used only with the greatest caution for any skin disease. Once induced, reactive dermatitis will never clear.

¶ FINGERNAIL GROWTH has no seasonal variations but the process slows with aging. In a ten-year self-study, William Bennett Bean, M.D., of the State University of Iowa, Iowa City, finds that the average daily rate of 0.119 mm., with extremes of 0.112 mm. and 0.132 mm., is 3 or 4 times the speed of toenail replacement. From 25 to 50% of the cut edge of the nail may normally be lost by attrition. A lag of seven days was associated with the mumps.

J. Invest. Dermat. 20:27-31, 1953.

¶ HYPOALLERGENIC LOTION, Desitin, containing cod-liver oil with zinc oxide, magnesium carbonate, rose and lime water, is a useful dermatologic medicament. In contrast to the successful use of such a bland preparation in 100 cases of inflammatory dermatitis, M. H. Holland, M.D., of Weehawken, N.J., cites the treatment-induced sensitizations that have been observed after topical applications of the "caine" group of local anesthetics and the antihistamines. Typical iatrogenic cross-sensitizations recently noted are cutaneous reactions to penicillin in the presence of procaine sensitivity or to oral Pyribenzamine given for an eruption caused by sulfonamides or for papular lesions resulting from azo dye.

J. M. Soc. New Jersey 49:469-471, 1952.

When prescribed individually by the doctor, occupational therapy is of special help to manic-depressives.

Occupational Therapy for Mentally Ill

BETTYANNE STEICHEN CONDON
Vince A. Day Center for Disturbed Children, Minneapolis

BY proper selection of occupational therapy for manic or depressed patients, needs peculiar to the individual can be met and a useful adjunct made to the total treatment.

The occupational therapist must know some basic data about the patient before even the first treatment session, explains Bettyanne Steichen Condon. Important is information that may assist in individualizing the approach, such as the diagnosis of the case, the presenting symptoms, and the patient's background, occupation, and special interests.

The goals the physician wishes reached must be understood. The prescription must specify whether the work projects are intended to make the patient closer to his family or more independent, to offer an outlet for anger, to help relieve guilt feelings, to give training in careful working, to quiet the patient, or to provide a basis for feelings of accomplishment.

The important thing is not what is made, but what is derived from the work. No dangerous tools are allowed.

Manic patients are usually excited, expansive, exorbitantly ambitious, yet insecure and filled with a sense of inadequacy under the bluster. Such persons are usually calmed by quiet, repetitive activities. When tasks involving painting are given, the slow careful brushing on of the paint rather than the color is stressed. Weaving projects are limited to small mats rather than to large complicated tablecloths; soft wool is used and a simple pattern so that the beating of the threads is secondary to the stereotyped, ritualistic movements.

Dramatic and exhibitionistic behavior is ignored. Unreasonable or unrealistic demands are not filled, but civil requests are given adequate attention. Reality is made attractive by the therapist complimenting the patient for honest achievements. Impulsiveness is carefully curbed, so that the patient will not ruin the work project and thus lose further self-esteem.

Kindness and firmness are effective with a manic person. Rejection must be carefully avoided because a feeling of rejection will aggravate the underlying depression.

Depressed patients need reassurance, guidance, opportunities to externalize hostility in an acceptable way, supervision because of the suicide risk, and acceptance without guilt-stimulating praise.

The management and treatment of the manic-depressive syndrome in an occupational therapy clinic. Am. J. Phys. Med. 31:415-421, 1952.

The depressed patient, unwilling to choose a work project because of feelings of uselessness and guilt, is assigned the initial task by the therapist. A menial monotonous task, such as sanding a table, that the patient can interpret as punishment helps to atone for guilt feelings. Repeated reassurance that the patient will not ruin the project conveys the impression that the therapist will control the patient's destructive impulses.

An attitude of kind firmness is employed, and reassurance is given, not in a solicitous way, but so as to help the patient interpret reality. Jobs given the patient, however menial, should be useful to help reestablish a feeling of worth.

Aggressiveness can be well expressed, in a way which avoids the patient hurting himself, in weaving projects. Using a large loom, the patient can beat back the weaving very hard and aggressively.

Although direct compliments are to be avoided, the results of the work can be commented upon favorably. The individual can then accept as much of the praise as the feelings of unworthiness permit.

Torsion of Spermatic Cord in Young Men

CLYDE L. DEMING, M.D., AND BURDICK G. CLARKE, M.D.

To SAVE the testicle from rapid destruction, a twisted spermatic cord should be regarded as a surgical emergency. Even in doubtful cases, exploratory operation should rarely be delayed, warn Clyde L. Deming, M.D., and Lt. Comdr. Burdick G. Clarke, M.C., U.S.N.R., of Yale University, New Haven, Conn.

Prehn's sign, increased pain when the scrotum is lifted, is useful in distinguishing the condition from twisted appendix testis, strangulated hernia, traumatic orchitis or hematocele, acute epididymitis, and acute orchitis.

Torsion results from defects of descent or from anomalous serous investments in the scrotum. The latter are usually bilateral and consist of absence of the gubernaculum testis and mesorchium, with high investment of the tunica vaginalis about the cord.

Testicular pain usually begins abruptly, often during sleep and without previous injury. Vomiting, low fever, and slight leukocytosis may occur. A tender, indurated scrotal mass is noted, and the testis is drawn up by torsion and cremasteric spasm.

A low inguinal or scrotal incision is made, the scrotal coats and tunica vaginalis are opened, and torsion is corrected. The parietal layer of the tunica vaginalis is excised, and the testis is sutured to the scrotal wall by each lateral surface.

Torsion of the spermatic cord among men of military age. U. S. Armed Forces M. J. 4:105-107, 1953.

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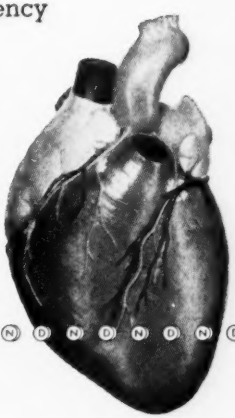

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Postural relief usually suffices in cases of acute hydronephrosis in pregnancy.

Acute Hydronephrosis of Pregnancy

WALTER A. SCHLOSS, M.D., AND MARK SOLOMKIN, M.D.
Mount Sinai Hospital, Hartford, Conn.

WHEN renal colic or hematuria appears during pregnancy, acute hydronephrosis should be suspected. The condition, which is secondary to ureteral occlusion caused by the gravid uterus, is a definite pathologic entity.

The renal pelves and upper ureters are dilated in 80% or more of pregnant women. This physiologic symptomless dilatation, with hydronephrosis, is not significant, provided infection does not supervene and the ureter is not completely obstructed.

However, this urinary stasis does predispose to infection, emphasize Walter A. Schloss, M.D., and Mark Solomkin, M.D.

That pressure is probably the prime cause of the hydronephrosis is supported by implications of the following facts:

- Dilatation is almost always greater on the right side—probably because of the dextrorotation of the uterus. Moreover, the sigmoid protects the left ureter.

- Ectopic kidneys do not show the physiologic dilatation.

- The pelvic portion of the ureters does not participate in the dilatation of pregnancy.

If severe or complete ureteral obstruction occurs, sudden sharp flank pain with radiation along the course of the ureter may be expected. Red cells are usually found in the urine.

The obstruction can often be overcome by postural relief, the patient lying on the unaffected side to shift the position of the fetus and thus to decrease the pressure on the ureter.

Prophylactic antibiotic therapy, such as oral aureomycin, should be given.

This conservative treatment will frequently bring complete relief in one or two days and, if an excretory urogram shows good function, the patient may be discharged from the hospital with no special precautions.

If the obstruction is not alleviated, an indwelling soft 5F ureteral catheter may be necessary. Ureteral catheterization is not without dangers, since renal infection and alarming hemorrhage may ensue. The catheter should not be left in too long.

The ability and the tendency for the urinary tract changes of pregnancy to retrogress after delivery make for an attitude of conservatism in therapy.

Acute hydronephrosis of pregnancy. J. Urol. 68:885-892, 1952.

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Ordinarily, for a patient with a movable kidney, reassurance is more to the point than nephropexy.

Abnormal Renal Mobility

ANTHONY F. KAMINSKY, M.D., RUSSELL B. ROTH, M.D., AND ELMER HESS, M.D.
St. Vincent's Hospital, Erie, Pa.

RENAL ptosis as an uncomplicated entity is rarely an indication for surgery. Operative treatment should not be done until careful study has established the ptosed kidney as the cause of the symptoms, state Anthony F. Kaminsky, M.D., Russell B. Roth, M.D., and Elmer Hess, M.D.

The freely mobile kidney is often physiologically normal, and the degree of descent does not determine the pathologic changes. To produce such changes, obstruction or infection as a result of stasis must be associated.

Ptosis is much more common in women than in men and the right kidney is more frequently involved than the left.

The most common symptoms are frequency, dysuria, urgency of urination, and a dull dragging pain in the lumbar area. The latter has a postural relationship, increasing during fatigue or prolonged standing, and is often relieved by rest in bed.

Lumbar pain is constant in location, and the patient can define the area consistently. Gastrointestinal symptoms vary and vomiting is unusual. A few patients have typical renal colic.

The diagnosis of nephroptosis is made with ease. However, to avoid the pitfalls of nephropexy, great judgment must be exercised in selecting cases for surgical treatment. A thorough urologic investigation and general study of the patient are required before a final decision can be reached.

Pathologic changes, as evidenced by delay in emptying of the pelvis or dilatation of the pelviocalyceal system, should be demonstrable. Thus the excretory urogram is the most valuable procedure in diagnosis. The films should be made with the patient recumbent and erect. Pyelectasis and calycectasis can be more accurately interpreted by this method than is possible by retrograde filling.

If urograms are inconclusive or are incomplete, retrograde studies should be used. Films are made five and ten minutes after removal of the catheters, and possibly later, to determine slowed pelvic emptying.

In noninfected cases postural therapy should be tried or a garment worn to determine if keeping the kidney in a normal position produces symptomatic relief. If the

(Continued on page 142)

Abnormal renal mobility. J. Urol. 69:21-25, 1953.

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*[illegible] A. D., Jr.: Med. Clin. North Amer. 36:1607, Nov. 1952

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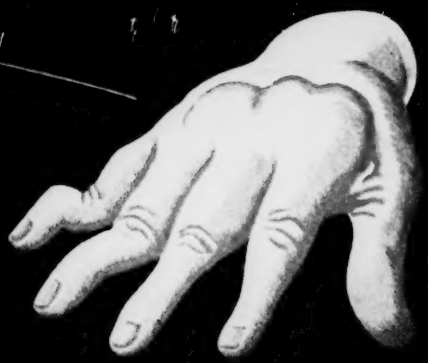

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slightest doubt exists regarding the significance of the nephroptosis, further observation is necessary. All possible causes of disturbance must be considered. Functional disorders of the nervous system can closely simulate organic disease in this instance.

Any operative procedure to correct difficulties caused by nephroptosis must be designed to hold the kidney in a normal position, provide free urinary drainage, and avoid damage to the renal parenchyma. The procedure is worthless unless the frequently associated lesions of the ureteropelvic area are corrected.

The kidney is freed from all perirenal tissue and the ureter is also freed for a considerable distance. All bands of tissue that may impair drainage are removed. Particular attention is given the ureteropelvic junction so that no mechanical interference with pelvic emptying remains. The pedicle is also dissected free of adherent tissue, and the sympathetic fibers are interrupted. The kidney is suspended in a hammock of perirenal fascia.

After surgery a pressure pad is applied to the corresponding hypogastrium. The foot of the bed is elevated for seventy-two hours. The patient is sent home in two weeks and advised to avoid strenuous exercise for a month. A urographic examination is made at three months.

Sciatic Pain as Urologic Symptom

MAXWELL MALAMENT, M.D., AND R. CARL BUNTS, M.D.

LESIONS of the upper urinary tract may cause pain extending into the lower extremity, resembling that from a ruptured intervertebral disk, without producing any of the symptoms of urologic involvement.

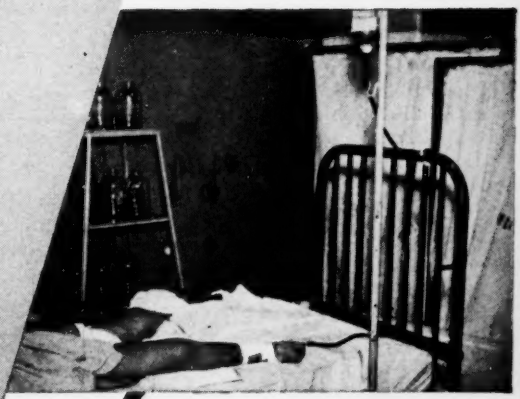
The femoral or sciatic nerves may be stimulated by continuity of an inflammatory process or by direct pressure from the lesion. Hence, urologic evaluation ought to be considered in the differential diagnosis of radiating pain to the lower extremities.

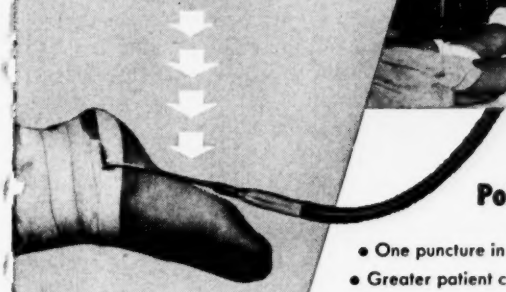
Maxwell Malament, M.D., of the Veterans Administration Hospital, East Orange, N. J., and R. Carl Bunts, M.D., of the Veterans Administration Hospital, Richmond, Va., describe 3 cases of upper urinary tract disease in which the predominating symptom was pain referred to the lower extremities. In all the cases a diagnosis of intervertebral disk herniation was considered.

The causative factor was found to be polycystic renal disease, unilateral multilocular cysts with hemorrhage, or an impacted ureteral calculus.

Upper urinary tract disease with symptoms simulating herniated nucleus pulposus. J. Urol. 69:46-54, 1953.

Polyethylene Tubing simplifies intravenous therapy





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Medical Forum

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Physiologic Resection of the Right Colon*

QUESTION: What is the best method for resection of the right colon for cancer?

Comment invited from
George P. Whitelaw, M.D.
M. E. Steinberg, M.D.
Harry E. Bacon, M.D.
Howard D. Trimpi, M.D.

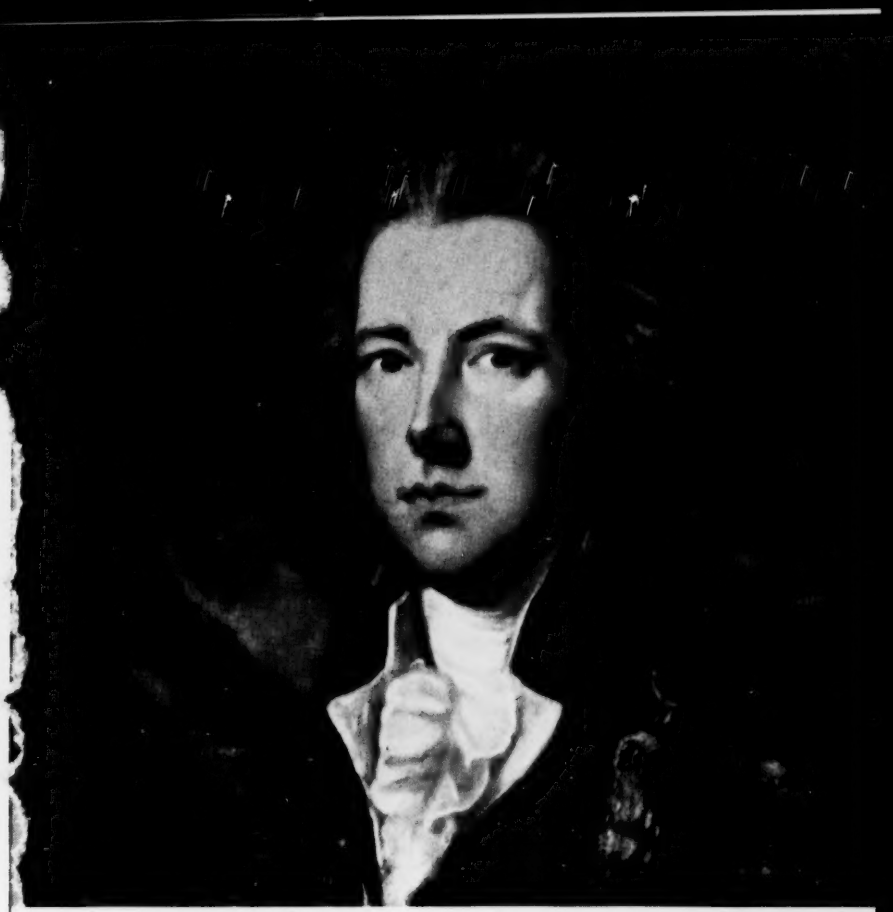
► TO THE EDITORS: Dr. J. Peyton Barnes emphasizes one of the foremost principles of cancer surgery. Prior to resection and manipulation of the tumor, blood and lymph channels draining the area of the primary growth should be divided. Although I would suspect that the majority of surgeons removing lesions of the right colon do not and will not follow the technic that Dr. Barnes describes, there is very little doubt that better end results would be obtained if such a technic could be accomplished.

In certain areas, following this principle exactly would not be technically feasible or safe and, in some instances, less of the lymph-node bearing area would be removed, in my opinion. In resection of the right colon, avoidance of damage to the duodenum and right ureter must be kept particularly in mind. These structures will not be exposed as easily by Dr. Barnes's method as in the older and more accepted technic of dividing the peritoneum in the right gutter and mobilizing the cecum and ascending colon as the primary part of the procedure. For this reason, acceptance of this new technic for the right colon by many surgeons may be difficult to attain.

Some surgeons also feel that the amount of manipulation of the lesion in the usual type of resection is more of a theoretic than actual hazard in the production of tumor emboli. I feel, however, that every precaution should be taken to avoid massaging or manipulating malignant lesions prior to removal, as small tumor emboli may be broken off into draining veins or lymphatics.

The principle of preliminary ligation of the drainage system of the primary lesion is more universally followed in breast surgery, as it is more easily applied by completing the axillary dissection and ligating all veins and lymphatics draining the lesion before removing the main tumor mass. One of the outstanding examples in which

*MODERN MEDICINE, Dec. 1, 1952, p. 92.



Now, as in 1805 when British Prime Minister William Pitt faced the Napoleonic menace, the free world confronts a colossus intent upon its destruction. Before such titanic threats, and the effort necessary to meet them, men falter—as even the great Pitt finally faltered—and fall into the varied psychic patterns grouped together by present-day physicians under the term "depression".

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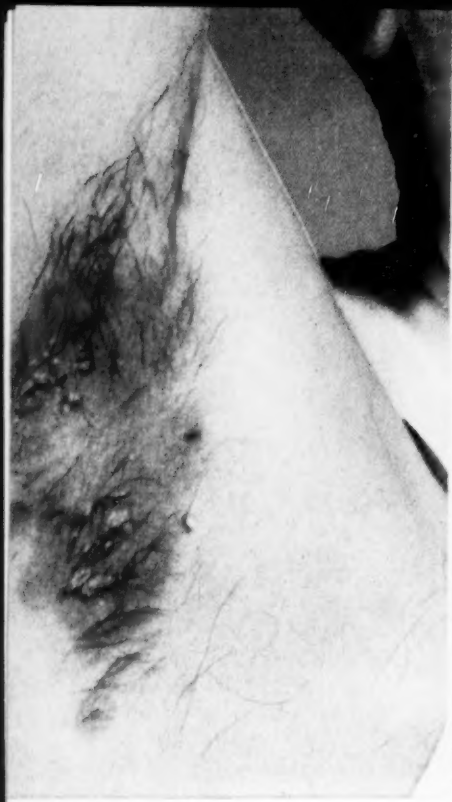

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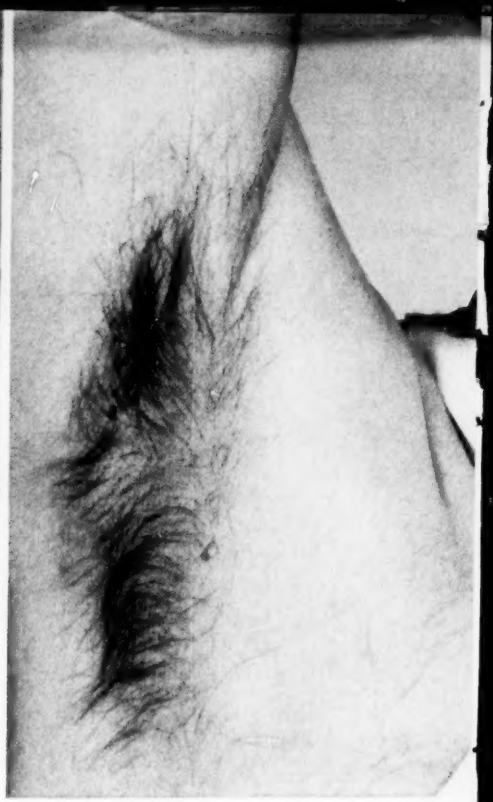

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such technic is of grossly demonstrable importance is in the case of renal cell carcinomas. In approximately 60% of such cases, tumor thrombi can be found in the renal vein. If the vein is not ligated distal to the thrombus and the lesion is manipulated to any degree, almost certainly emboli will be broken off, with subsequent pulmonary metastatic growth, if such has not already occurred.

In the surgery of low rectal carcinomas, the principle annunciated by Dr. Barnes is well followed in the usual combined abdominoperineal resection, but I would suspect that in other areas of the large bowel, as well as in the surgery for gastric malignancy, the majority of surgeons do not apply this method to its best advantage.

This general subject also brings up the question of how often distant metastases may be initiated as a result of too frequent palpation of the primary lesion by several members of the visiting staff, house staff, or students.

Dr. Barnes's paper should be given very careful consideration by all those engaged in surgery of malignancy in any portion of the body.

GEORGE P. WHITELAW, M.D.
Boston

► TO THE EDITORS: Local recurrence after excision of malignant growths results from incomplete removal of the tumor mass and its regional lymph nodes or from spilling of tumor cells because of careless or accidental opening of the tumor. I removed a localized recurring growth three times in one patient after an abdominoperineal resection for cancer of the rectum. The patient succumbed to an intercurrent disease eight years after the original operation.

The emphasis placed by Dr. J. Peyton Barnes on severing the vascular and lymphatic channels before manipulating or removing a carcinomatous tumor mass to prevent the forcing of malignant cells through the blood and lymph channels into areas beyond the site of the original lesion is one of the important considerations when this maneuver appears feasible.

In the presence of a large fixed tumor mass with extension into the lateral peritoneum and into a particularly fat mesentery, identification of the origin of the mesenteric blood vessels is accomplished more easily and safely after initial mobilization of the malignant growth and bowel from the lateral side. Under these conditions mobilization of the tumor mass from the lateral side enables the surgeon to do a more complete job in cleaning out regional lymph nodes.

The necessity for unruffled, gentle, and careful manipulation is clearly apparent. Before the abdomen is closed, the denuded area is washed out with generous amounts of warm saline.

When a large denuded area cannot be bridged with peritoneum or covered with omentum, it is advisable to use a drain. A suitable sack is fashioned from rubber dam tissue by sewing the edges togeth-

er. The sack is then filled with vaginal packing gauze. This rubber dam sack emerges through a stab wound to the right of the main incision. The packing is removed in stages beginning on the seventh or eighth postoperative day.

New clamps and still newer technics continually cropping up for the performance of "aseptic" and closed methods of anastomosis are not only anachronistic in this age of antibiotics but also endlessly confusing to the uninitiated. The tyro or the surgeon who does an occasional bowel resection is more likely to succeed with the open end-to-end or end-to-side technic of ileocolostomy.

A supplementary Witzel ileostomy, fashionable in previous decades, only adds to morbidity and mortality. The stoma of a carefully executed ileocolostomy, not withstanding the initial edema, is more likely to permit passage of flatus and ileal contents distally than an awkwardly placed narrow caliber catheter. Distention of the bowel is prevented either by an indwelling Levin tube with suction or, if necessary, by a Miller-Abbott tube. A preliminary ileostomy or cecostomy is employed only in the presence of acute ileus.

Advances in anesthesia, employment of antibiotics, and vigilant and judicious pre- and postoperative care have made possible extension of the scope of radical surgery for cancer with commensurate safety for the patient and with less anxiety to the surgeon.

M. E. STEINBERG, M.D.
Portland, Ore.

► TO THE EDITORS: In general, colectomy or resection of the colon usually begins with freeing and mobilizing the bowel before dividing it or ligating its blood supply. In the past such an approach was deemed safer from the standpoints of less danger of sepsis, ease of ligating blood vessels, and the opportunity of radically changing the operation to exteriorization or, if the blood vessels had not as yet been divided, to terminating the procedure should the patient suffer shock or anesthetic complication.

For benign lesions such a course has merits. For malignancy we must agree with Dr. Barnes that ligature of the lymphatic and venous return is most important and should precede any manipulation of the growth whenever possible.

Although we have not employed the exact technic described by Dr. Barnes for resection of carcinomas of the right colon, we have adhered insofar as possible to such principles of cancer excision as: [1] excision of the lesion in block, [2] ligature of lymphatic and venous drainage prior to manipulation of the growth, [3] extirpation of involved lymphatics and potentially involved lymphatics, [4] excision of large segments of bowel proximal and distal to the growth, and [5] excision of organs or tissues involved or contiguous to the growth.

In resection of the right colon, our division of the transverse colon is to the left of the midline to include lymphatics draining to midcolic nodes. Lymph nodes of the

superior mesenteric group are carefully excised and sent to the laboratory for histologic section. We employ end-to-end, open, ileocolic anastomoses.

HARRY E. BACON, M.D.
HOWARD D. TRIMPI, M.D.
Philadelphia

Anticoagulants in Coronary Disease*

QUESTION: When should anticoagulants be used in management of coronary thrombosis?

Comment invited from
Shepard Shapiro, M.D.
Joseph M. Spitzer, M.D.
Robert W. Langley, M.D.
W. L. Mullins, M.D.

► TO THE EDITORS: In "good risk" patients the fatality is low, complications are few, and the dangers of hemorrhage from anticoagulant treatment exceed those of the primary disease. This is the substance of Dr. David Littmann's paper on the use of anticoagulants in coronary disease.

In acute myocardial infarction the occurrence of mural thrombi is determined not by whether the patient is a "good risk" or a "poor risk" subject but by the site and extent of the infarct. Since the development of mural thrombi can be inhibited by early and adequate anticoagulation we insist that it is in the best interest of the patient to render the blood hypocoagulable as soon as the diagnosis of myocardial infarction is suspected. Such treatment should continue at least until the patient is fully ambulated.

The occurrence of venous thrombosis and pulmonary embolism is unpredictable. Although it is true that statistical studies have indicated that the incidence and mortality of these complications is substantially less in the younger than in the older age groups of patients with acute myocardial infarction, such phenomena are not unknown in the younger age groups. The fact is that multiple pulmonary embolism does occur in patients in the late 30's or early 40's.

One can never be certain that a given patient of the "good risk" group will follow the rule established by the statistician and remain free of thromboembolic complications. Natural processes have a way of disregarding man-made laws and usually travel along their own paths, at times to the detriment of the host.

One need witness only one patient succumb to an avoidable thromboembolic complication and he will ever hesitate to place the life of another individual in jeopardy by relying on his faith in medical statistics.

The hazard of hemorrhage induced by anticoagulation is minimal if the therapy is properly controlled. It is true, the literature contains an abundance of reports of serious or fatal bleeding occurring in the course of anticoagulant treatment. Excepting those instances in which silent ulceration or obscure disturbance of the blood-vascular system existed, anal-

*MODERN MEDICINE, Nov. 15, 1952, p. 114.

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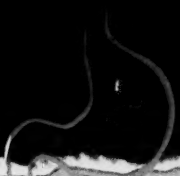

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ysis of the various cases described reveals the fact that anticoagulant therapy was either improperly administered or poorly controlled.

We insist that if the clinician understands the mechanism whereby the oral hypoprothrombinemia-inducing agents cumulate in the body as reflected in serial prothrombin time values, he can adjust the dosage in each case to avoid excessive hypocoagulability of the blood and any consequent hemorrhage. It is regrettable that this comprehension has been lacking in many reports. One reason is that there has been too little individualization of dosage and instead a tendency to follow, more or less blindly, rules published by some workers which are not based upon physiologic characteristics of both the metabolic disposition of the drugs and the synthesis of prothrombin in the liver.

The dosage schedule advocated by the Committee on Anticoagulants of the American Heart Association, which has been very widely publicized in medical journals, is unphysiologic and favors cumulative effect. The method which we have advocated virtually since the initial introduction of dicumarol a decade ago, known as the intermittent dosage method, avoids cumulative effects, follows the pattern of physiologic disposition of the drugs, and respects the physiologic characteristics of prothrombin production in the liver *(Postgrad. Med.* 11:74-78, 1952). We would like to emphasize the fact that in our extensive use of the intermittent dosage method we have not encountered a single instance of serious bleeding.

Briefly stated, we believe that the reason for the fear of hemorrhage from oral anticoagulant therapy is that dosage schedules of the drugs employed have been faulty, assuming, of course, that the laboratory control has been adequate and reliable. This latter demands a thromboplastin reagent of uniform standardized activity.

Based upon our experience, we advocate the use of anticoagulant therapy in every case of acute myocardial infarction unless specific contraindication for such treatment exists.

SHEPARD SHAPIRO, M.D.
JOSEPH M. SPITZER, M.D.
New York City

► TO THE EDITORS: I have read Dr. Littmann's paper with considerable interest and I agree with most of his suggestions. I am not sure what is meant by the statement: "Good risk patients with myocardial and subendocardial infarctions have few complications and a low fatality rate may be expected." The criteria for evaluating the supposedly "good risk patients" are sometimes rather obscure.

I am inclined to question the idea that the hemorrhagic dangers of anticoagulant therapy may exceed those of the primary disease. The routine anticoagulant therapy in a hospital where accurate observation can be maintained is attended with little danger of hemorrhage.

(Continued on page 154)

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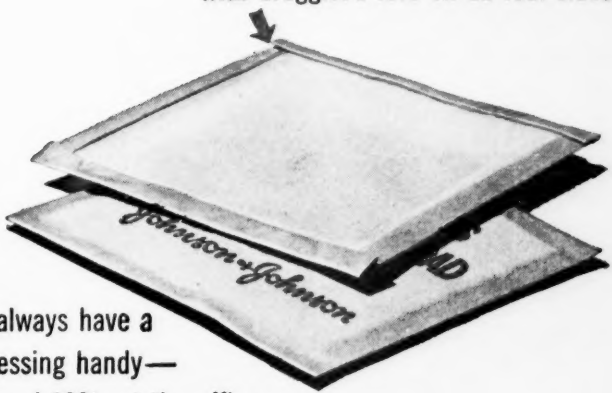

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1. Dripps, R. D.: Selective Utilization of Barbiturates, J.A.M.A. *139*:148-150 (Jan. 15) 1949.

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I am glad to find that Dr. Littmann recommends considerable moving in bed, slight activity, early ambulation, and so on, all of which do a great deal to overcome the problem of thromboembolic phenomena. These activities, including frequent leg exercises and early use of the toilet instead of the bedpan, are extremely important. Ambulation as early as the end of the second week may be open to question but one does not advise keeping the average patient in bed as long as six weeks.

The patient's initial condition does remain a deciding factor in the use of anticoagulant therapy. No one will doubt the efficacy of this treatment when congestive failure, persistent shock, intractable pain, and so on, prevail. Anticoagulant drugs have no influence on the development of mural thrombi over the sites of myocardial infarctions or the systemic emboli that many ensue.

ROBERT W. LANGLEY, M.D.
Beverly Hills, Calif.

► TO THE EDITORS: Since 1946 we have treated over 600 patients with acute coronary thrombosis with anticoagulants and by doing so we have reduced mortality from 22 to 11% and the incidence of thromboembolic complications from 11 to less than 1%.

The controls for this series of cases were treated on the same service prior to 1946 and in exactly the same fashion with the exception of the use of anticoagulants. It is our opinion that all patients in whom the diagnosis of coronary thrombosis is made should be treated with one of these drugs.

The severity of an attack of coronary thrombosis is notoriously difficult to judge in the initial stage. Many of the seriously ill patients admitted to our service had premonitory symptoms for days or weeks and frequently had been treated for angina pectoris, coronary insufficiency, or mild coronary occlusion. They were then rushed to hospital when the catastrophe occurred. We believe that if such patients were treated with anticoagulants from the onset, the overwhelming attack might be warded off.

Many patients whose course at home had been considered relatively mild have been admitted with pulmonary, cerebral, or peripheral emboli which we believe could have been avoided by anticoagulant care. Some of these patients had the electrocardiographic diagnosis of subendocardial necrosis.

Between 1928 and 1930, of a group of 200 patients on our service, 10% had thromboembolic phenomena. Between 1943 and 1946 the percentage was almost the same. Despite mortality figures on groups of selected cases, coronary occlusion is still the most important cause of death of patients with heart disease. It is our opinion that the use of anticoagulants has been the most valuable measure in the treatment of coronary thrombosis and should be used whenever that diagnosis is made.

W. L. MULLINS, M.D.
Pittsburgh

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INTRAVENOUS UROGRAPHY

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"Over-all we have experienced a 50% diagnostic improvement in the examination, which we are convinced is attributable directly to the larger quantity of iodine available for excretion."

INTRAVENOUS PYELOGRAMS OF RETROGRADE QUALITY—Nesbit and Nesbitt[2], University of Michigan, used UROKON SODIUM 70% in 585 patients and reported:

"In one-third of the cases the density of the pyelographic shadow was considered to be equal to that of retrograde pyelograms. No previous analysis with any other medium has ever approached these figures."

SAFETY—Barry and Rose[3], made the following observations on 1160 cases:

"In the tabulation of this large series of cases, the observers became lax in recording the presence or absence of reaction because of the marked absence of toxic reactions. For this reason only 556 of the total are so noted. Of this group, 497 or 89.5% had no reaction."

[1]Zink, O. C. Routine Clinical Experiences Using Urokon 70% in Intravenous Urography (Private Report dated May 12, 1952).
[2]Nesbit, R. M. and Nesbitt, T. E.: Experiences with High Concentration Urokon for Pyelography. Univ. of Mich. Med. Bull. *18*.225 (1952).
[3]Barry, C. N. and Rose, D. K.: Urokon Sodium 70% in Excretory Urography, J. Urol. (to be published).

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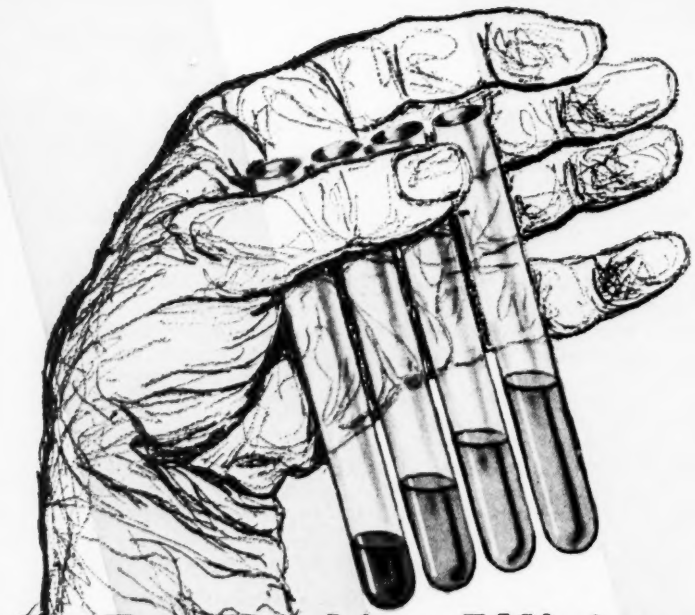

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TYPICAL AGENT	CLASSIFICATION	EFFECT	FLUSHING EFFICIENCY	COMMENT
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Natural bile or unconjugated bile salts	Choleretic	Stimulates secretion of normal bile by the liver	++	Utilizes increased amounts of bile of normal viscosity
Dehydrocholic acid	Hydrocholeretic	Stimulates secretion of fluid bile by the liver	+++	Utilizes copious amounts of free-flowing bile – adequate in absence of spasm of sphincter of Oddi
Dehydrocholic acid, homatropine methylbromide, phenobarbital (Cholan *hmb*)	Hydrocholeretic, parasympatholytic, sedative	Stimulates secretion of fluid bile by the liver, and relaxes sphincter of Oddi spasm	++++	Utilizes copious amounts of free-flowing bile and relaxes smooth muscle spasm for greater therapeutic efficacy

Persistent Symptoms after Cholecystectomy*

QUESTION: What are usual causes for symptoms persistent after cholecystectomy?

Comment invited from
Carl O. Rice, M.D.
John M. McGowan, M.D.

► TO THE EDITORS: The surgical pathologist has learned that histopathologic changes in the gallbladder are infrequently found in the absence of cholelithiasis. The most usual causes for symptoms after cholecystectomy can be summarized as follows:

Improper indications for surgery—Patients may present clinical histories of fat intolerance and dyspeptic symptoms which often lead the physician to a diagnosis of biliary disease. Unless presumptive or positive evidence of cholelithiasis can be established, clinical experience is teaching us that cholecystectomy should not be done. Cholelithiasis is indicated by a history of gallbladder colic, cholecystography revealing a displacement shadow, or evidence of a nonfunctioning gallbladder. With these findings the physician is justified in recommending cholecystectomy. Without these findings the dyspeptic and biliary symptoms would be better treated medically.

As Drs. Warren H. Cole and William J. Grove have noted, the most common cause for persistent symptoms after cholecystectomy can be attributed to operating without proper indications. The improper indications for cholecystectomy may include a great variety of so-called biliary symptoms.

Certainly the surgeon would prefer to eliminate these cases from his operative list; there is no satisfaction in removing a gallbladder only to have the patient return with the same set of symptoms that the surgery was expected to relieve.

Incomplete surgery—Symptoms may persist after cholecystectomy when surgery has been incomplete.

If the patient has had jaundice in association with an attack of gallbladder colic, the common duct should be explored and a T tube inserted. A cholangiogram should be made before the T tube is finally removed. If this has not been done, the recurrence of symptoms in the postoperative period may be due to an overlooked stone in one of the biliary ducts even though the patient may have been free from jaundice at the time of operation.

Surgical trauma—Excessive operative trauma after cholecystectomy and curious or unnecessary exploration may account for stricture of the biliary passages. Other accidents associated with surgical manipulation may be mentioned as causes for recurrent symptoms—unrecognized cutting of the biliary passage, cutting of an accessory biliary duct, cutting or tying a tented-up common duct, false passage of an exploratory probe, and so on.

Thorough surgery should be done, although at times extensive surgical trauma should be eliminated because bad effects may outweigh the good effects anticipated if exploration is too thorough. In

*MODERN MEDICINE, Dec. 15, 1952, p. 88.

this respect the surgeon should keep in mind the end result to the patient.

In conclusion, if we emphasize more accurately the proper indications for cholecystectomy in the first instance, it is likely that the patient will be better served and the surgeon will have fewer disappointed patients in the late postoperative period.

A multiplicity of unusual circumstances may account for recurrent symptoms following cholecystectomy, but to mention these in detail may tend to overemphasize their importance to the detriment of the more common causes of failure.

CARL O. RICE, M.D.

Minneapolis

► TO THE EDITORS: Extensive studies of T-tube bile intrabiliary pressure studies over the past seventeen years tend to show that a great number of people suffering pain after cholecystectomy have cholangitis. This can be detected by intrabiliary pressure studies taken at weekly intervals, starting two weeks postoperatively.

The following pressure studies are done:

• Resting intrabiliary pressure is an index of the patency of the lower end of the bile duct; if the pressure is above 30 mm. of water above the ensiform, it is believed elevated. Amyl nitrite is given; if the pressure drops, the elevation is believed due to a spasm; if not, it is caused by a stone, pancreatitis, or stricture.

Spasm is usually secondary to and associated with cholangitis. When the cholangitis disappears, the spasm disappears. The best treatment for cholangitis is prolonged drainage of the common bile duct with a T tube.

• Perfusion pain level of the duct can be measured by running water into the bile duct, up to pressures of 550 mm. The average patient, free of infection, should tolerate at least 500 mm. without pain. If pain or any sensation of discomfort develops below this level, cholangitis can be diagnosed.

The intensity is comparable to the decrease in perfusion pain pressure. Perfusion pain pressure steadily improves with prolonged drainage by T tube.

T-tube drainage is needed in approximately 50% of patients requiring cholecystectomy. A McGowan-Keelye T tube is recommended for biliary drainage; an inflatable bag prevents the tubing from being pulled out. The T tube should be brought out through a stab wound lateral to the incision.

T-tube drainage should be continued with gradually increasing clamping of the tube until [1] the resting intrabiliary pressure is below 30 mm. of water, [2] the perfusion pain level is 500 mm. or over, and [3] cholangiograms show no stones, pancreatitis, or other obstruction in the common duct.

Elimination of infection also decreases the surface tension of bile and, therefore, encourages a freer flow through the ampulla of Vater. When bile is free of infection, the bile acids keep the sediment in so-

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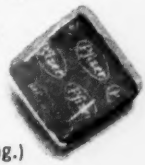

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lution and discourage infection and stasis. When infection is present the bile acids split, the sediment precipitates, and stones are encouraged.

Many people form stones in the common bile duct repeatedly. One patient I have seen had stones removed from his bile duct on the average of every seven years from the age of 10 to the age of 60. After his last operation, five years ago, the above T-tube drainage regime was followed and he has been entirely symptom free. In another case, the patient's T tube was pulled out too soon and required subsequent operations, following which the above regime was carried out. The patient has been symptom free for five years.

An ideal adjunct to this therapy would be use of bile acids in the presence of an indwelling T tube. However, if any obstruction is present, the excessive flow of bile from bile acids would merely increase the pressure in the bile duct and produce pain. A bile preparation which would lower the surface tension or viscosity of bile and increase its detergent action without increasing the volume would be ideal.

I have seen jaundice occur in patients given morphine associated with duodenal spasm. I have also seen duodenal spasm in patients suffering from cholangitis which would produce intrabiliary pressures as high as 350 mm. of water. Since this is about the top secretion pressure of the liver, one can readily see that jaundice is possible.

Stones in the bile duct may be dissolved by the injection of ether. I have evidence that hyaluronidase before ether causes the stones to dissolve more readily.

Narcotics postoperatively tend to produce duodenal spasm and may cause persistence of biliary pain. I have seen pancreatic pain result from the use of narcotics. This is indicated when the patient has pain after the subcutaneous injection of narcotics. Narcotics should be used with care after gallbladder operations. The least spasmogenic type is Dilaudid, and even this may be too spasmogenic in some cases. It may be necessary, in special cases, to depend on barbiturates entirely.

Pancreatitis—The fundamental causes of pancreatitis are [1] obstruction to the flow of pancreatic juice, and [2] excessive amount of pancreatic juice, creating pressure and leakage into the pancreatic tissue.

Associated with biliary disease is often duodenal spasm and, therefore, pancreatic duct obstruction. Removal of the gallbladder is excellent treatment for pancreatitis in many cases. The next single most valuable treatment is prolonged drainage of the common bile duct, permitting the cholangitis to disappear entirely. This, in my experience, has done more to cure pancreatitis than any other single measure.

When prolonged drainage fails, transduodenal sphincterotomy, vagotomy, and splanchnicectomy and even resection of the head of the pancreas have been recommended. These procedures have varying results and are still considered ex-

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perimental or of too great magnitude to attempt. A procedure which I have not yet had the opportunity to try would be to divide the pancreas at its neck and transplant both ends of the duct, distal and proximal, into the jejunum, allowing free flow of pancreatic drainage in both directions.

Cystic duct neuroma—For the last ten years I have completely denervated the cystic duct before clamping it. I always believe that a small portion of cystic duct should be left attached to the common bile duct to prevent stricture of the latter. A very long cystic duct may periodically contain a residue of stones resulting in duodenal spasm and biliary pain similar to that caused by an inflamed gallbladder.

Psychosomatic disease—In biliary and pancreatic disease, as in most diseases of digestion, there is a tremendous psychosomatic factor which may delay recovery. Cooperation with a neuropsychiatrist is very desirable.

JOHN M. MCGOWAN, M.D.
Quincy, Mass.

Indications for Tracheotomy*

QUESTION: When should tracheotomy be done?

Comment invited from
Houck E. Bolton, M.D.
Charles P. Bailey, M.D.

► TO THE EDITORS: As Dr. Hans Von Leden has indicated, tracheotomy as a therapeutic, prophylactic, or supportive measure after cardiac or pulmonary surgery is often very necessary.

Postoperative pain, in varying severity, is always present after thoracotomy. Many measures have been recommended by thoracic surgeons to reduce this pain. We have tried them all and have been rather disappointed in each instance.

The postoperative pain is, of course, conducive to voluntary and involuntary restriction of chest motion, resulting in suppression of cough impulse and a shallow or restricted respiratory excursion. These two processes allow for accumulation of secretions in the bronchial system, and obstruction in the smaller air passages results in atelectasis. Postoperative atelectasis must be avoided or treated vigorously as early as possible when it occurs.

At the same time that limitation of the respiratory excursion and failure to cough result in retained secretions in the bronchial system, more or less anoxia is present. This latter condition is highly undesirable in the cardiac surgical patient, because hypotension is so frequently associated. With poor aeration of the lungs added to poor circulation, cerebral ischemia is most imminent. Cerebral ischemia existing for a very short period of time can result in permanent brain damage.

In either the cardiac or pulmonary surgical case, the anesthetist will often find a patient who is abnormally "wet" so that innumerable tracheal aspirations are necessary during surgery to evacuate accumulating secretions. In such instances,

*MODERN MEDICINE, July 1, 1952, p. 98.

we do not hesitate to do a tracheotomy, for aspiration purposes, before the patient is removed from the operating room.

In our early experience with intracardiac surgery, cerebral embolism occurred all too often, and while this problem now has been well controlled, we are always alert for its appearance. When this develops, tracheotomy is anticipated and performed at the earliest evidence of retained bronchial secretions.

In every thoracotomy case, oxygen therapy is routine in the early postoperative period. Administration is greatly facilitated by a tracheotomy. A small rubber catheter is inserted into the tracheotomy tube and the rate of oxygen flow adjusted to 6 to 8 liters a minute. This rate is slowly diminished as the blood pressure stabilizes and the color of the lips and nail beds of the patient becomes satisfactory. Prolonged use of oxygen may satisfy oxygen requirements and this in itself may be conducive to a limited respiratory excursion.

Tracheotomy is a simple procedure. All our residents are well trained in the technic. The operation is performed under sterile conditions and usually as a bedside procedure.

We are careful in our instructions concerning aspiration through a tracheotomy tube. The catheter used for aspiration is kept in a bactericidal solution when not in use. Tracheal aspiration should not be done too often, because mechanical irritation of the trachea is quite possible.

Bronchoscopy may be performed through the site of the tracheotomy should such a procedure be necessary. The tracheotomy tube is simply removed during the procedure and then replaced.

At any time during the postoperative period, when the cough reflex is obliterated in a comatose patient, tracheotomy may be a lifesaving measure, keeping the tracheobronchial tree free of secretions and facilitating oxygen administration.

Tracheotomy in its simplicity and harmlessness should not be delayed when indicated. When in doubt, we tracheotomize.

HOUCK E. BOLTON, M.D.
CHARLES P. BAILEY, M.D.
Philadelphia

"Tell me about your poison oak, but start from scratch."

THE DUAL ROLE OF CARBONATED BEVERAGES IN NUTRITION

It is well known that carbohydrate is more than just a source of energy.[1] It plays an important role in the "operative" as distinguished from the "energy" metabolism—is a part of the machinery of metabolism as opposed to its fuel. Sugar spares protein[2], prevents acidosis and ketosis; detoxifies and increases tissue resistance to infection.[3]

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1. Nutrition Reviews, 10:172, 1952
2. Allison, J. B., Fed. Proc. 10:676, 1951
3. Soskin, S. and Levine, R., Carbohydrate Metabolism U. of Chicago Press, 1946

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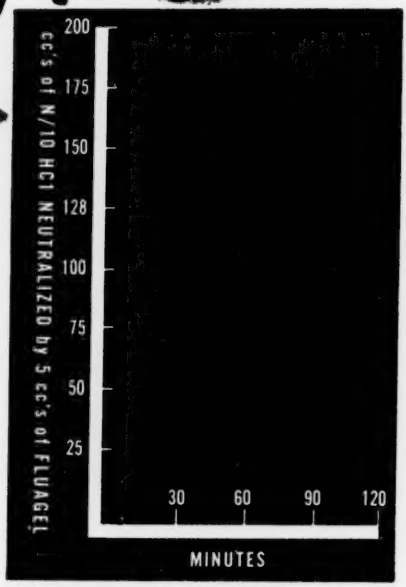

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Correspondence

(Continued from page 32)

on a given solution as the numerator and the strength of the solution as the denominator. Then instead of reducing to a common denominator, he simply added the numerators and added the denominators, thus establishing an absolutely meaningless fraction.

One of the most noted of our pathologists, of what was probably our most famous medical school of thirty years or so ago, did a monumental piece of research on the relative frequency of the islands of Langerhans in the proximal, middle, and distal portions of the pancreas and established figures which have been quoted in most of the major articles on the subject which I have read. Unfortunately, the frequencies which he supposedly established are worthless.

He counted the number of islets per square unit in each of many sections. Then, in order to determine the number of islets per *cubic* unit of pancreas, he *squared* the counts, thus raising the value to the *fourth* power instead of the cube! On that basis a cubic yard would contain 81 instead of 27 cubic feet!

The pathologist in question was a thoroughly competent mathematician, but he slipped.

The point is this: Anyone may make such a mistake and, because even the great have made such mistakes, everyone should be particularly alert in checking statements of mathematical fact. Editorial staffs should seek verification by the author of any ambiguous or questionable statement.

JOHN H. SCHAEFER, M.D.
Los Angeles

Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-237

THE CLUE

ATTENDING M.D: I would like you to see a 21-year-old woman who is waiting in the gynecology outpatient clinic. *(Walking toward clinic)* She has never menstruated, a primary amenorrhea with frank virilization. She has strikingly well-developed musculature with acne and excessive hair on the face and limbs. The clitoris is about 2 cm. long and there is a mass about 6 by 6 cm. in the right vault.

VISITING M.D: At least we know this isn't a simple hirsutism problem. The evidence of virilism is clear. How tall is she?

ATTENDING M.D: She is almost the same height as her parents—5 ft. 9 in.

VISITING M.D: And her voice is deep?

ATTENDING M.D: Yes. At about 15 years of age it began to change.

VISITING M.D: And no sexual urge?

ATTENDING M.D: Correct. Her reactions seem masculine. She had only the usual childhood diseases. She is an only child.

VISITING M.D: At what age did her mother begin to menstruate?

ATTENDING M.D: At 17.

VISITING M.D: Did the patient grow rapidly at any time?

ATTENDING M.D: From 11 to 16 she spurted up to her present height.

VISITING M.D: Has she been to this clinic before?

ATTENDING M.D: Yes, a week and a half ago.

VISITING M.D: What about basal metabolism, follicle-stimulating hormone, and 17-ketosteroid assay?

PART II

ATTENDING M.D: The basal metabolism is −15. The FSH is positive for 10 and 30 mouse units per 100 cc. of urine.

VISITING M.D: That is the level found in postmenopausal women.

ATTENDING M.D: The 17-ketosteroid assay showed 8 and 9 mg. per twenty-four hours on 2 occasions.

VISITING M.D: *(Consultation in doctors' room after examination)* She is an intelligent person. Some of her mannerisms are masculine. The pubic hair is female in distribution. The breasts are small; the cervix is soft and small. I can feel the mass you refer to by rectal examination. Her blood pressure was 125/70. Neurologic examination, including funduscopic study, is normal. What about the blood sugar and glucose tolerance and complete blood and urine studies?

ATTENDING M.D: Normal.

VISITING M.D: Chest, head, and pelvic roentgen examinations?

ATTENDING M.D: Normal.

VISITING M.D: This is not simple from a diagnostic viewpoint, considering the normal 17-ketosteroids and elevated FSH. She certainly should have the tumor removed. When is surgery scheduled?

ATTENDING M.D: Tomorrow.

VISITING M.D: Good. Let us analyze our data.

PART III

VISITING M.D: The differential diagnosis is 1 of 3 categories: [1] lesions of the adrenal cortex, [2] lesions of the ovary, or [3] nonhormonal lesions. There is, of course, a striking similarity in the physiologic disturbances of lesions in the gonads and adrenals. Do you know the commonest cause of adrenogenital syndrome in a patient of this age?

ATTENDING M.D: Congenital hyperplasia of the zona reticularis of the adrenal, but I don't think that is the diagnosis.

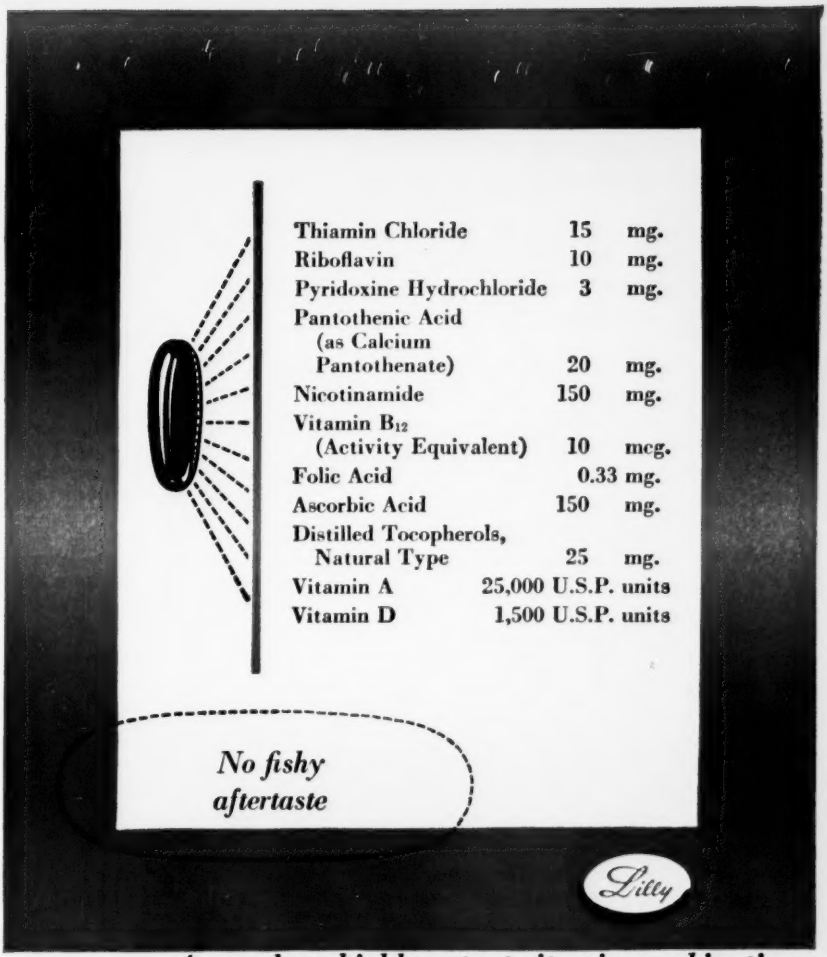
VISITING M.D: Neither do I, not because of the mass, but for clinical reasons. With this lesion the clitoris is hypertrophied at birth and stature tends to be short because of premature and excessive androgenic production. Do you know why?

ATTENDING M.D: The rate of epiphyseal closure is accelerated. This lesion begins in prenatal life. With the growth spurt in early adolescence, one would have to think of an adrenal tumor.

VISITING M.D: The normal 17-ketosteroid is strong evidence against this. It is usually very high. Now, since this has become a sort of exercise, do you know what is the most common ovarian lesion responsible for virilization?

ATTENDING M.D: Arrhenoblastoma. This could produce all the physical signs here and is sometimes associated with a normal 17-ketosteroid excretion.

VISITING M.D: But two factors argue against such a diagnosis. Arrhenoblastoma is relatively rare in the pubertal period and is usually associated with normal FSH excretion, certainly not with high values. I thought of the so-called "adrenal-like" tumor of the ovary, but the commonly associated features of Cushing's syndrome such as hypertension, impaired glucose tolerance, stri-



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Theracebrin

(PAN-VITAMINS, THERAPEUTIC, LILLY)

ae, and osteoporosis are not evident here.

ATTENDING M.D: I think we must consider an ovarian tumor because of the mass.

VISITING M.D: Then the question arises: Is it a tumor or hyperplasia of the ovarian hilus cells, which are morphologically identical with the Leydig cells of the testis? They are the source of ovarian androgens. With these tumors, 17-ketosteroid excretion may be normal, but they occur in women of pre- or postmenopausal age and no reported tumor has been palpable.

ATTENDING M.D: Well, at least we seem to be narrowing the field.

PART IV

VISITING M.D: This patient doesn't fit any of these groups. I wonder if this is really a genetic intersexuality, if the patient is genetically a male hermaphrodite and not a female virilized by androgenic hormones elaborated at puberty. The malformed gonads of the hermaphrodites sometimes give rise to tumors. Do you know what they are called?

ATTENDING M.D: Yes, dysgerminoma or seminoma.

VISITING M.D: I don't catch you on anything today!

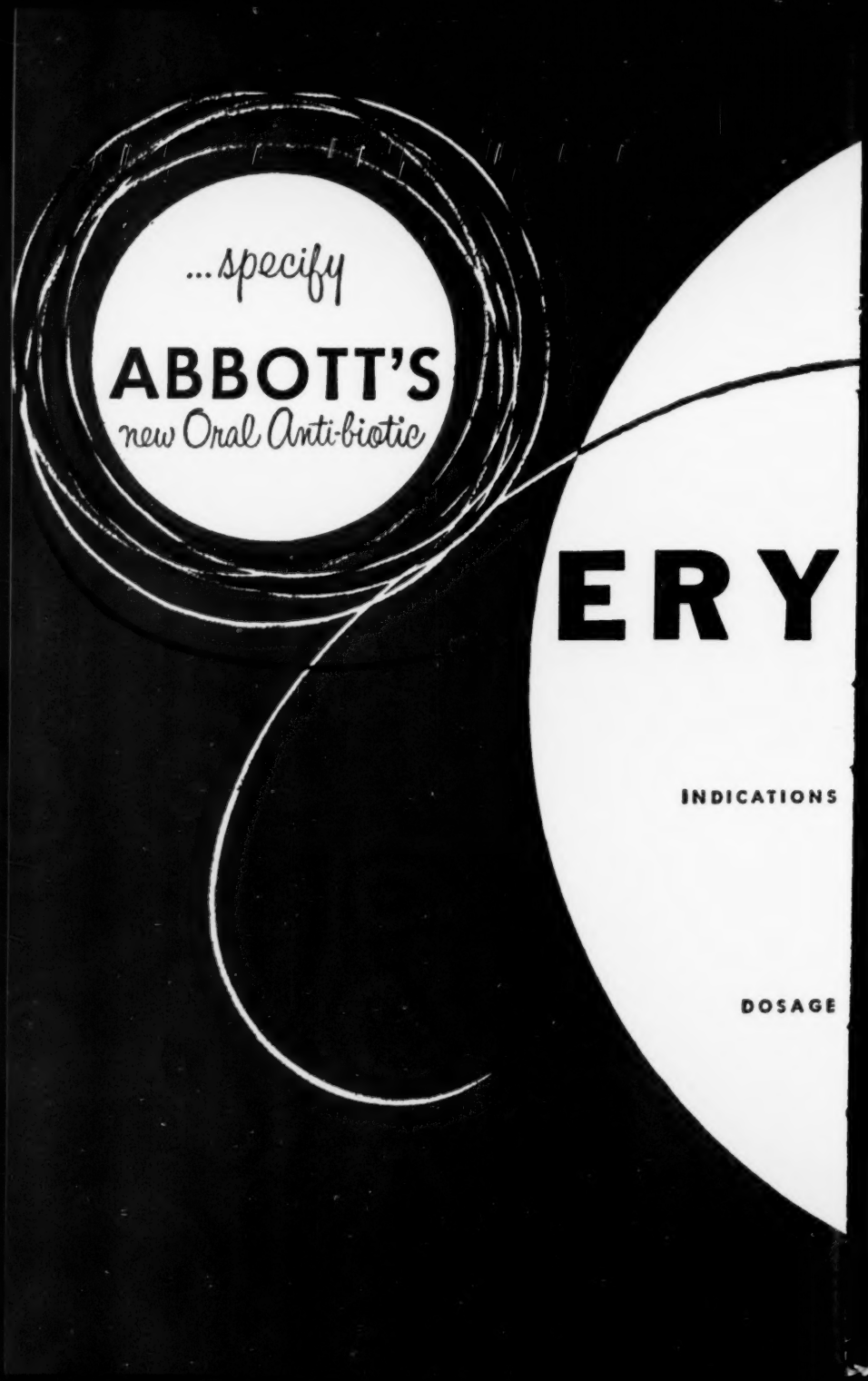
ATTENDING M.D: I read a book last night.

VISITING M.D: Good. The dysgerminoma, as you know, is a tumor of early life, hence it is sometimes called carcinoma puellarum. The FSH may be high and the 17-ketosteroids normal. These tumors have a predilection for the right ovary or are often bilateral.

SURGEON: *(Next day at surgery)* This is a large right ovarian tumor. The microscopic study is consistent with your diagnosis of dysgerminoma. Parts of it are like the testicular seminoma, with thecal or Leydig type cells. Other elements resemble the granulosa-theca type as seen in the arrhenoblastoma. The mass is entirely tumor cells.

(Editor's note: Several years after surgery the tumor had not recurred. The 17-ketosteroid levels dropped and the FSH remained positive. The virilizing features did not regress. Apparently the tumor to some degree inhibited the pituitary gonadotropic output. This was a dysgerminoma mixed with androgen-producing neoplastic cells.)

"Are you sure there isn't a thing wrong with me? I've got two weeks' annual sick leave coming."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ABBOTT'S
new Oral Anti-biotic
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INDICATIONS
DOSAGE

Especially effective against gram-positive organisms resistant to other antibiotics.

Low toxicity; gastrointestinal disturbances rare; no serious side effects reported.

Special "high-blood-level" coating.

ERYTHROCIN, *0.1-Gm. (100-mg.) Tablets, bottle of 25.*

THROCIN

TRADE MARK

(Erythromycin, Abbott)

Pharyngitis, tonsillitis, scarlet fever, erysipelas, pneumococcic pneumonia, osteomyelitis, pyoderma. *Also other organisms* susceptible to its action, which include staphylococci, streptococci, pneumococci, *H. influenzae*, *H. pertussis*, and corynebacteria.

Total daily dose of 0.8 to 2 Gm., depending on severity of the infection. A total daily dose of 0.4 Gm. is often adequate in the treatment of pneumococcic pneumonia.

For the average adult an initial dose of 0.1 to 0.4 Gm. is followed by doses in the same range every four to six hours.

For severely ill patients doses up to 0.5 Gm. may be repeated at six-hour intervals if necessary. Satisfactory clinical response should appear in 24 to 48 hours if the causative organism is susceptible to ERYTHROCIN. Continue for 48 hours after temperature returns to normal.

Abbott

1. McGuire et al. (1952), J. Antibiotics & Chemo., 2:281, June. 2. Heilman et al. (1952), Proc. Staff Meet. Mayo Clin., 27:385, July 16. 3. Haight and Finland (1952), New Eng. J. Med., 247:227, Aug. 14.

BASIC SCIENCE *Briefs*

Oncology

Prevention of Cancer

Induction of tumor in rats by carcinogenic azo compounds apparently involves pituitary and possibly adrenal function. Dr. A. C. Griffin and associates of Stanford University, Stanford, Calif., prevented hepatoma in rats by hypophysectomy. Postoperatively, diets containing 0.06% 3'-methyl-4-dimethylaminoazobenzene were given for nineteen weeks, almost twice as long as the period ordinarily required for tumor development in 100% of intact animals receiving the compound.

Cancer Research 13:77-79, 1953.

Experimental Medicine

Inhibition of Heart Damage

Administration of cortisone to dogs with myocardial infarcts experimentally produced by ligation of the left coronary artery reduces size of the infarct and increases vascularity of the heart. Animals receiving the drug after acute coronary occlusion have a 25% better chance of survival. Cortisone affects the local area of infarction by decreasing fibroblastic proliferation and delays healing during the early stages. The drug also increases interarterial coronary anastomoses. Dr. Aran S. Johnson and associates of Harper Hospital, Detroit, suggest that increased vascularity of the heart may provide sufficient collateral circulation to lessen the area of infarction. No untoward effects such as rupture of the myocardium or aneurysmal dilatation which might be ascribed to delay in healing of the infarct were noted from cortisone treatment.

Circulation 7:224-228, 1953.

Cytology

Regenerating Mouse Liver

Partial hepatectomy in mice results in rapid growth of remaining lobes. Effects of removing 65% of mouse liver were investigated by Dr. Hisako O. Yokoyama and associates of the University of Kansas, Kansas City. Lipid content of parenchymal cells increases greatly during the first two postoperative days, followed by influx of other substances in preparation for cellular synthesis. The original ratio of liver to body weight is essentially restored by the sixth day, but total initial hepatic weight, nitrogen, and desoxyribonucleic acid are not recovered before the eighth day. The total number of nuclei reaches 87% of normal value in twenty-eight days. However, individual rates of repair differ greatly.

Cancer Research 13:80-85, 1953.

what you must know about

BUTAZOLIDIN®

(brand of phenylbutazone)

Accumulated experience in many thousands of cases has now proved conclusively that BUTAZOLIDIN produces therapeutic results in arthritis comparable to those obtainable with cortisone or ACTH. At the same time it has become equally evident that like other potent pharmacodynamic agents BUTAZOLIDIN can cause toxic as well as therapeutic response. In general, the drug has been found to produce minor reactions in a considerable percentage of cases and serious reactions in a few. To a considerable extent such reactions are preventable by proper precautions, and when not preventable are often readily controllable. For this reason physicians are urged to familiarize themselves thoroughly with the properties and proper usage of this potent new agent before prescribing it.

not a simple analgesic

The striking clinical benefits of BUTAZOLIDIN in arthritis and allied disorders cannot be due solely to analgesic effect since it has only moderate analgesic effect in non-rheumatic disorders.

an effective and potent anti-arthritic

BUTAZOLIDIN produces both improvement of function and relief of pain. In rheumatoid arthritis a recent report[1] indicates "major improvement" in 40 of 68 cases. Another notes "marked decrease in swelling, increase in range of motion, and increase in strength" in 41 per cent of patients with lesser improvement in an additional nine per cent.[2] A third study[3] records "appreciable pain relief" in 69 per cent of patients with 50 per cent showing objective evidence of improvement. Similar favorable results have been recorded in gout, spondylitis, osteoarthritis, bursitis, and other painful musculoskeletal disorders. These findings illustrate that BUTAZOLIDIN when properly used provides gratifying therapeutic benefit in a wide variety of painful and disabling disorders.

(1) Kusell, W. C., and Schaffarzick, R. W.: California Med. 77:319, 1952. (2) Stephens, C. A. L., Jr., and others: J.A.M.A. 150:1084 (Nov. 15) 1952. (3) Steinbrocker, O., and others: J.A.M.A. 150:1087 (Nov. 15) 1952.

Geigy

GEIGY PHARMACEUTICALS Division of Geigy Company, Inc.

[illegible]

Physiology

Serum Lipids in Diabetes

Severity and duration of diabetes seem unimportant factors in determining levels of both serum lipoproteins and cholesterol. Critical comparison of serum lipoproteins and of cholesterol levels in normal subjects and in young diabetic patients has established values which will provide means for further study of the influence of serum lipids on vascular complications. Dr. N. F. Keiding and associates of the Joslin Clinic, New England Deaconess Hospital, and Harvard University, Boston, find a significant relationship between the presence of retinitis and elevated values of the S_f 12-20 class of lipoproteins. Arterial calcification has a less striking relationship to these substances. All instances of diabetic nephropathy had elevation in all the serum lipid components.

Diabetes 1:434-440, 1952.

Oncology

Furans and Mouse Tumors

Chemotherapeusis against spontaneous mammary tumors of mice in contrast to transplanted neoplasms permits observation of the influential variables of virus factor, inception of tissue change, and growth. In the C_3H strain, Dr. Windsor C. Cutting and associates of Stanford University, San Francisco, find that furfuralacetone especially and, to a lesser extent, furoic acid, furfuracrylamide, and furfurylacetate prevent or delay the appearance of carcinoma. Slight antineoplastic effects are shown by 2-aminopyrimidine. The concentration of para-aminoazobenzene that is needed for slight inhibition is toxic. Dr. B. L. Freelander and associates at Mount Zion Hospital, San Francisco, and the University of San Francisco note that other furan derivatives are somewhat inhibitory in transplanted sarcoma-180 in the Webster strain. These compounds include furoamide, furylacrylamide, alpha-ethyl-furylacrylamide, and N-phenylfurylacrylamide. Inanition probably contributes to the action.

Stanford M. Bull. 10:304-307, 310-312, 1952.

Lipids

Mechanism of Hypercholesteremia

Increased levels of plasma cholesterol in rats follow injection of triton because of a physicochemical change in the plasma proteins produced by this detergent. Triton WR-1339 alters blood lipoproteins, increasing adsorptive powers so that more cholesterol is retained. Drs. Meyer Friedman and Sanford O. Byers of Mount Zion Hospital, San Francisco, find the livers of triton-injected rats unchanged in ability to synthesize, discharge, or destroy cholesterol. Intestinal elimination of the lipid is also found to be normally efficient. Results indicate that triton induces hypercholesteremia by altering plasma alone, not by changing cholesterol metabolism of any organ, or by interference with excretion from the body.

J. Exper. Med. 97:117-130, 1953.

short REPORTS

Hypertension

Cerebral Anoxia

In cases of hypertension or arteriosclerosis, rebreathing into a paper bag for fifteen to thirty seconds may relieve attacks of dizziness, weakness, aphasia, or other symptoms of focal cerebral anoxia. From 5 to 10 forced breaths often terminate episodes that might otherwise last for hours. Dr. Allen S. Johnson of the Springfield Hospital, Springfield, Mass., believes that self-administered carbon dioxide either relaxes spastic arteries or dilates collateral vessels about a circulatory obstruction.

New England J. Med. 248:194-196, 1953.

Experimental Medicine

Radio Krypton and Gastric Acidity

Gastric acidity is suppressed when a balloon containing radioactive krypton is inflated in a dog's stomach. The inert gas, which emits beta radiation only, is blown into a balloon at the end of a stomach tube. For 2 dogs, 4 and 7 treatments were required to elevate gastric *p*H from 1 to 6 and to reduce total acidity from 135 to 12 units. Each treatment consisted of 350 cc. of krypton instilled for seventy-eight minutes. The gastric juice remained unaltered at *p*H 6 three months after treatment, reports Dr. Winton Steinfield of Upton, N. Y. Surgical exploration of the gastric mucosa did not reveal important changes grossly or histologically. The dogs appeared well, and blood counts remained normal. Because krypton is inert, no serious damage would occur from balloon breakage. Krypton may prove of value in treatment for hyperacidity associated with peptic ulcer.

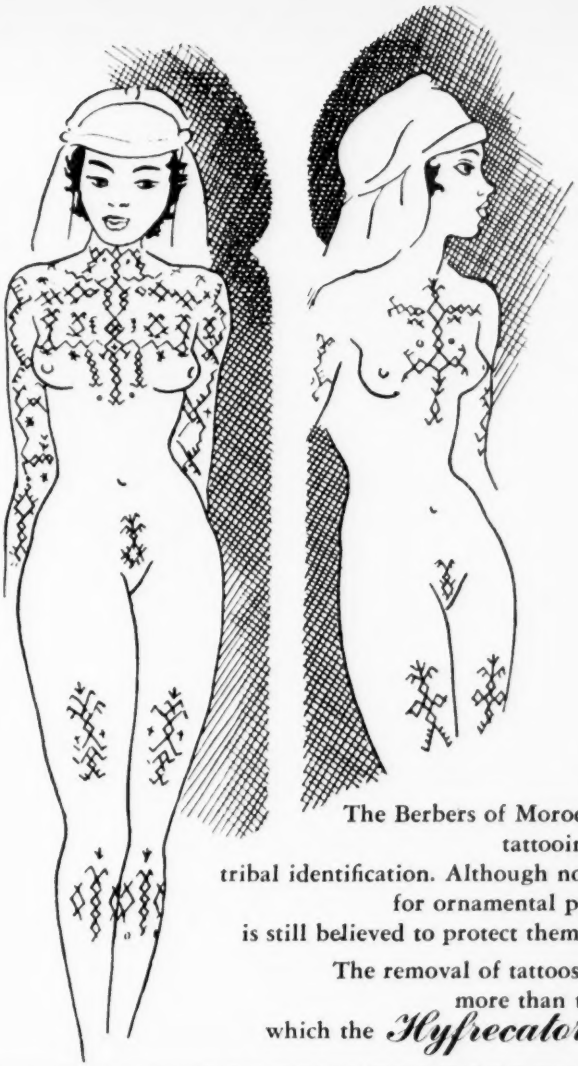
Proc. Soc. Exper. Biol. & Med. 81:636-638, 1952.

Anemia

Infection and Megaloblastosis

Spontaneous megaloblastic anemia occurs during infection in infants and in natural and in experimentally induced inflammatory states in monkeys. Since abnormal erythroblast formation is associated with a deficiency of vitamin B_{12} and of ascorbic and folic acids, Dr. Charles D. May of the University of Iowa, Iowa City, and associates of the University of Minnesota, Minneapolis, believe that infective processes impede the metabolism of the pteroylglutamic compounds. As megaloblasts persist in the bone marrow despite adequate intake of ascorbic acid, additional B_{12} and folic acid should be included in the treatment of severe or prolonged disease during the acute and convalescent periods.

Am. J. Dis. Child. 84:718-728, 1952.



The Berbers of Morocco once practiced tattooing as a method of tribal identification. Although now used primarily for ornamental purposes, tattooing is still believed to protect them from evil spirits.

The removal of tattoos is just one of the more than thirty technics for which the *Hyfrecator* is ideally suited.

Please send me your new four-color brochure showing step-by-step technics for the removal of superficial skin growths.

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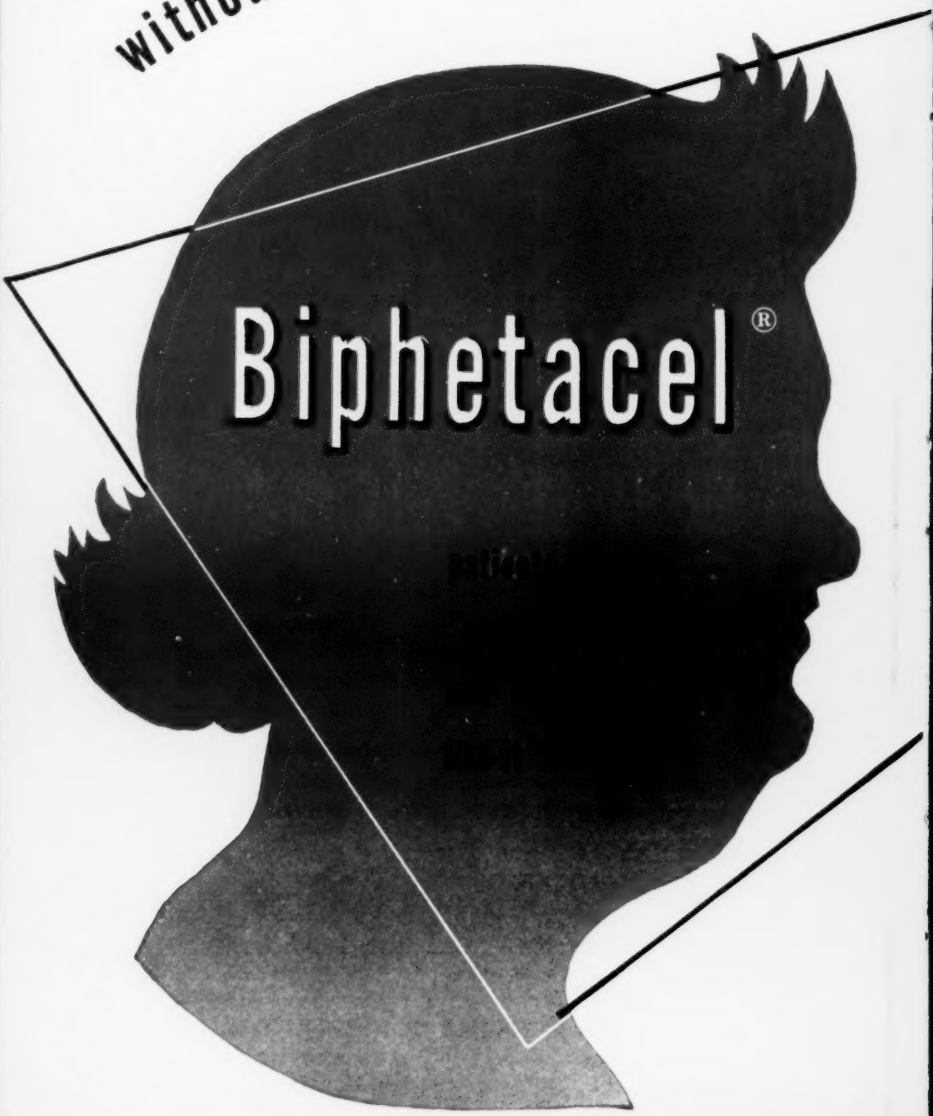
for positive appetite control
without side effects...



Exclusive 1:3 L/D ratio

Clinical Report

"... Biphetacel has been tested recently with excellent results. It contains the 1:3, l/d ratio of amphetamine phosphate together with methyl atropine nitrate (Metropine®) and sodium carboxymethylcellulose (to reduce constipating effect of amphetamines). It has been administered to 236 overweight patients over an average time of six weeks. The responses have been classified according to the patients' subjective feelings in regard to appetite suppression, as follows: 14 patients—no effect; 30 patients—slight effect; 105 patients—satisfactory effect; 87 patients—excellent effect..."

S. C. Freed, M. D.—Newer Concepts in Treating Obesity, GP, Vol. VII, No. 1, Jan. 1953

CURBS APPETITE EFFECTIVELY

PRESERVES "ENOUGH-TO-EAT" FEELING

ASSURES NORMAL ELIMINATION

Write for literature

Available on Prescription at All Leading Pharmacies

small dosage...
Low Treatment Cost

VAGOTONIC patients, 1 tablet ½ to 1 hr. before meals. SYMPATHICOTONIC patients, ½ tablet ½ to 1 hr. before meals.

Each scored tablet contains Racemic Amphetamine Phosphate Monobasic 5 mg.; Dextro Amphetamine Phosphate Monobasic 5 mg.; Metropine® methyl atropine nitrate, Strasenburgh), 1 mg.; Sodium Carboxymethylcellulose, 200 mg.

Strasenburgh

R. J. STRASENBURGH CO., ROCHESTER 14, N. Y., U. S. A.

Virology

Atypical German Measles

Rubella without rash can be caused by the agent that produces rubella with rash. Dr. Saul Krugman and associates of New York University, New York City, administered infected blood serum intramuscularly or virus-containing nasopharyngeal washings orally and intranasally to subjects who had not had German measles. In some induced cases, no rash was evident. Infected materials were obtained from patients the first day after onset of rash and produced rubella in nine to sixteen days. Although the manner in which maternal rubella infection causes congenital malformations is not known, the disease without clinical manifestations may have the same deleterious effect on the fetus as a typical infection.

J.A.M.A. 151:285-288, 1953.

Microbiology

Cytologic Changes in Tubercle Bacilli

Lysozyme is an effective bactericide for tubercular organisms in vitro when used in large quantity. Young cells of the BCG and Ravenel strain of *Mycobacterium tuberculosis bovis* are treated with 1,000 to 2,000 units of lysozyme per cubic centimeter for forty-eight hours. Dr. Quentin N. Myrvik and associates of the University of Washington, Seattle, report only a 1% survival of organisms after exposure to the enzyme. Electron microscopic examination reveals characteristic degenerate changes in the lysozyme-treated cells corresponding to the lethal effect of the drug. Lobulation, increase in the density of the cytoplasm to electrons, and the loss of cell membranes are noted, although the cytoplasmic remains retain the property of acid-fastness. Similar but less extensive effects result when *Myco. tuberculosis avium* is subjected to the same treatment.

Am. Rev. Tuberc. 67:217-231, 1952.

Serology

Collagen Disease and Tests for Syphilis

Chronic false-positive reactions to standard serologic tests for syphilis may indicate collagen disease. False reactions of the acute type, due to various infections, regress spontaneously within six months, whereas chronically false reactions have no known precipitating cause and the aberrant reaction may persist for years or a lifetime. Drs. Joseph Earle Moore and Charles F. Mohr of Johns Hopkins University, Baltimore, report that an exhaustive physical examination and history of 51 patients found to be chronically false-positive reactors revealed serious collagen diseases—disseminated lupus erythematosus, rheumatoid arthritis, periarteritis nodosa, or rheumatic fever—in all but 6 cases. The incidence of false reactions was determined by a treponemal immobilization test in conjunction with standard serologic methods.

Ann. Int. Med. 37:1156-1161, 1952.

on call wherever you are...

At the hospital, in your office, on house visits, you'll find the convenience and simplicity of Steraject syringe and cartridges of penicillin, streptomycin and dihydrostreptomycin valuable, whenever these antibiotics are indicated. If you have not received your Steraject syringe, be sure to see your Pfizer Professional Service Representative.

Unbreakable syringe for use with various dosage forms of penicillin, streptomycin and dihydrostreptomycin supplied with sterile foil-wrapped needles.

Steraject single-dose disposable cartridges include:

Steraject Penicillin G Procaine Crystalline in Aqueous Suspension (300,000 units) (600,000 units) (1,000,000 units)

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Steraject Dihydrostreptomycin Sulfate Solution (1 Gm.)

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Pfizer

ANTIBIOTIC DIVISION, CHAS. PFIZER & CO., INC., BROOKLYN 6, N. Y.

*TRADEMARK, CHAS. PFIZER & CO., INC.

Cardiology

Biopsy in Mitral Stenosis

Lesions resembling Aschoff bodies seen in the endocardium may not indicate active acute rheumatism. The cells are not all of the typical structure or distributed in all 3 tissue layers of the heart. Dr. J. B. Enticknap of Guy's Hospital, London, obtained biopsies of the left atrium of 71 patients with mitral stenosis. One-third of the specimens contained Aschoff cells, although the patients were not rheumatic. Intimal thickening was frequently observed and in many cases was due to incorporation of organizing thrombi.

Brit. Heart J. 55:37-46, 1953.

Oncology

Drug for Leukemia

Myleran, a compound recently synthesized at the Royal Cancer Hospital, London, behaves somewhat like the nitrogen mustards but is relatively nontoxic in oral doses. The formula is 1:4-dimethanesulfonyloxybutane. Drs. A. Haddow and G. M. Timmis observed intense inhibitory effects on rat carcinoma and myeloid depression in both rat and man. Dr. D. A. G. Galton observed encouraging results during a two-year trial in chronic myeloid leukemia, although acute cases were not affected. Thrombocytopenia, the only serious side reaction noted, may be avoided if the daily dose does not exceed 10 mg. and treatment is withheld when platelet count is below 100,000 per cubic millimeter.

Lancet 264:207-213, 1953.

Diabetes

Excess Sugar and Fat in Blood

Hyperglycemia of diabetes is regularly attended by hyperlipemia of equal severity. The esterified fatty acids of the blood, especially the triglyceride fraction, are greatly elevated during hyperglycemic states, whereas cholesterol and phospholipids are unaltered, find Dr. Edwin F. Hirsch and associates of the University of Chicago and St. Luke's Hospital, Chicago. After high blood levels of glucose have been induced in diabetic patients by withholding insulin and removing diet restrictions, normoglycemia is readily established by reintroducing the drug and restricting diet. Esterified fatty acid levels return to normal at the same time normoglycemia is attained. Maintenance of normal levels of blood sugar in diabetes mellitus is of particular importance since a concomitant normal level of serum lipids is sustained and the evolution of atherosclerotic disorders may be delayed.

Arch. Int. Med. 91:106-117, 1953.

Antibiotics

Antituberculosis Drug

Amicetin, a crystalline antibiotic isolated from soil, is particularly active against gram-positive organisms in vitro, including *Mycobacterium tuberculosis*. C. DeBoer and associates of Kalamazoo, Mich., believe that the drug is superior to streptomycin in some respects and without some of the undesirable side effects.

NEW!

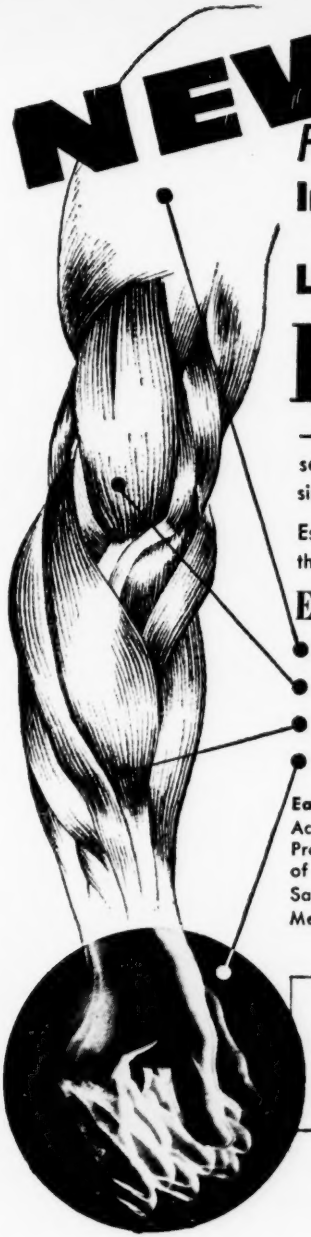
FOR THE ARTHRITIC...

Immediate Symptomatic Relief
plus
Long-range Systemic Control

ERTRON® s-m

—features for the first time the reliable analgesia of salicylamide, the muscle-relaxing qualities of mephenesin, and the time-proved antiarthritic steroid, Ertron.

Especially valuable in the initial stages of arthritis therapy, when rapid relief from pain is indicated.



ERTRON s-m

- *alleviates pain in afflicted joints*
- *relaxes associated muscle spasm*
- *relieves skeletal muscle pain*
- *increases mobility of the joints*

Each Ertron-S-M capsule contains:

Activation products (activated vaporized ergosterol-Whittier Process—biologically standardized) having antirachitic activity of fifty thousand U.S.P. units..... 5 mg.
Salicylamide.....162 mg.
Mephenesin.....125 mg.

— Bottles of 100 —

Also regular—**ERTRON**—for reliable, sustained arthritis management—and **ERTRON PARENTERAL** for combined oral and parenteral administration.

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CHICAGO 11, ILLINOIS

Division Nutrition Research Laboratories, Inc.

Antibiotics

Water-absorbing Penicillin

Cephalosporin N, a form of penicillin with unusual antibacterial and water-absorbing features, is described by Dr. E. P. Abraham of Oxford University, England, and associates as having action equally potent against *Staphylococcus aureus* and *Salmonella typhi.* The compound may be the same as synnematin, an antibiotic produced by other fungi of the *Cephalosporium* family.

Cardiology

Interarterial Anastomoses

Knowledge of the speed and conditions under which interarterial coronary anastomoses develop is of great practical importance in the management of coronary artery disease. Dr. Paul M. Zoll and associates of Beth Israel Hospital and Harvard University, Boston, examined young pigs whose hearts normally show no functionally significant anastomoses, also the case in human hearts. The production of a relative cardiac anoxia by vasomotor drugs, anemia, and mechanical narrowing of a coronary artery was observed for effect on stimulating the development of anastomoses. Of all the drugs tested, only sodium nitrite speeded the rate of development. The drug also showed therapeutic value when administered after mechanical coronary artery narrowing. Anemia produced by frequent small bleedings also significantly stimulated anastomosis formation in normal pigs and occasionally protected animals against acute coronary artery occlusion. Functionally effective anastomoses first appeared two days after treatment, but full protection was not elicted before twelve days after exposure to cardiac anoxia.

Circulation 6:832-842, 1952.

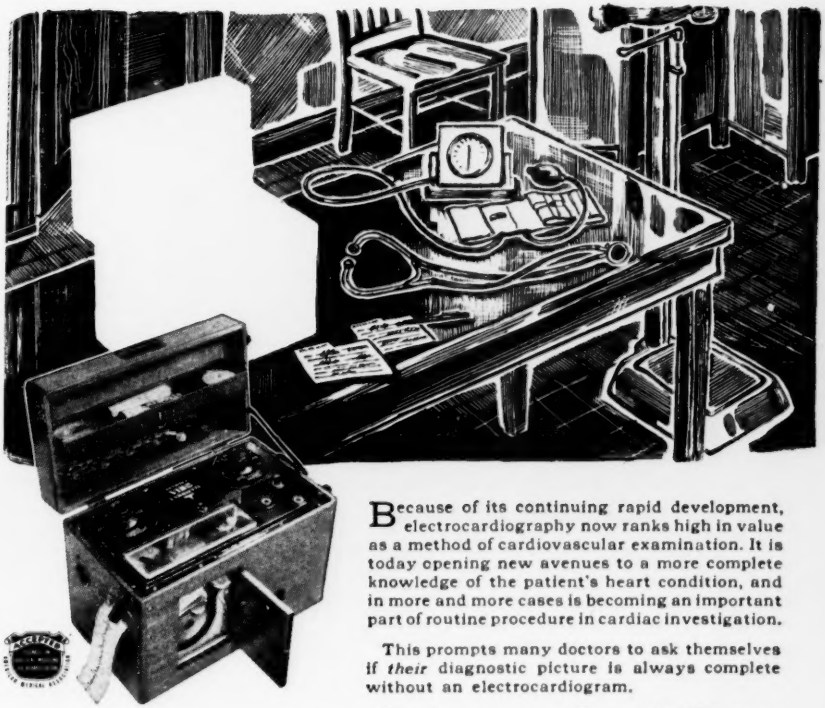
Radiology

Determination of Liver Metastases

Radioactivity survey is a reliable method of detecting hepatic metastases. Radioactive iodinated human serum albumin is employed as the tracer material and a wide-angle scintillation counter is used to note the gamma rays. Dr. Lloyd A. Stirrett and associates of Wadsworth General Hospital, Veterans Administration Center, and the University of California, Los Angeles, inject a single intravenous dose of 300 microcuries of the radioactive material. The results are obtained twenty-four hours later. With the patient in a supine position, 42 specific locations are marked on the skin at 5-cm. intervals from the nipple line to the intercristal line and from flank to flank. Readings taken at each site are compared to normal values, and a variance from control figures indicates neoplastic involvement of the liver. False-positive and false-negative results were significantly absent among 56 patients so studied; a diagnostic accuracy of 96% was obtained. Added advantages of the method are ease of performance and immediate availability of results.

Surg., Gynec. & Obst. 96:210-214, 1953.

Is your examination always complete without an electrocardiogram?



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Because of its continuing rapid development, electrocardiography now ranks high in value as a method of cardiovascular examination. It is today opening new avenues to a more complete knowledge of the patient's heart condition, and in more and more cases is becoming an important part of routine procedure in cardiac investigation.

This prompts many doctors to ask themselves if *their* diagnostic picture is always complete without an electrocardiogram.

Whether or not *you*, Doctor, should have an electrocardiograph of your own can only be decided by you. We here at Sanborn Company merely offer you the benefit of our almost thirty years of ECG design and manufacture.

We are proud of our VISO-CARDIETTE, which is the result of this long experience and knowledge. We feel sure that those who own Visos will tell you they are dependably accurate, simple to operate, ruggedly constructed, well serviced, and worthwhile investments in better diagnosis.

May we tell you more about the Viso? Descriptive literature will be sent gladly on receipt of your request.

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PIONEERING THE FI

TRUE HEMATOPOIETIC STIMULANT

Specific Bone Marrow Stimulation

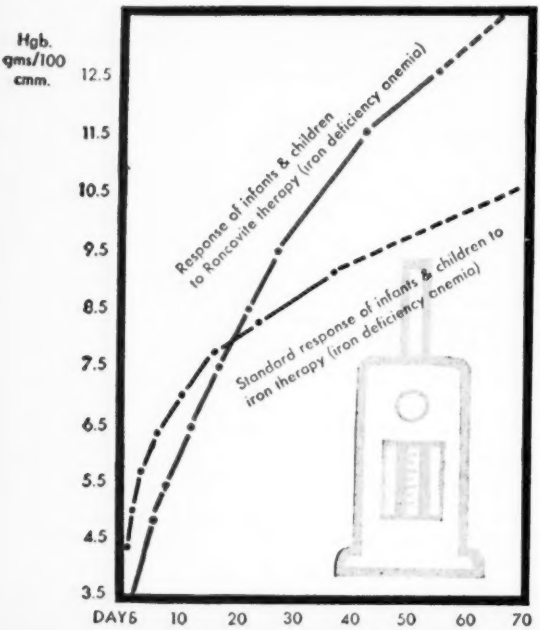
An entirely new approach to the successful treatment of human secondary anemia has been opened up with the introduction of the first true hematopoietic stimulant—Roncovite.

Roncovite offers, for the first time, the specific bone marrow erythropoietic action of cobalt—with adequate iron for the formation of hemoglobin.

In iron deficiency anemia where iron has been the standard treatment, Roncovite produces a faster response, greatly superior erythropoiesis and up to fourfold increases in the utilization of iron.[1, 2]

In the anemia accompanying infection or chronic inflammatory disease, where iron is useless, Roncovite provides—in many cases—a striking and dramatic hematopoietic response.[3, 4, 5, 6, 7]

The above clinical findings mean that Roncovite offers a significant advance in the treatment of all types of "secondary" anemia.



Comparison of the response of hypochromic anemic infants and children to Roncovite and to iron; with Roncovite, iron utilization was so efficient that 58% of the ingested iron was converted to hemoglobin—as compared to the usual average of 15% utilization from ferrous sulfate.—Standard response chart Josephs, H.: J. Pediat. 49:246 (1931).

RONCOVITE*

RONCOVITE—PIONEERED BY LLOYD RESEARCH

Tablets—each enteric coated, red tablet contains:

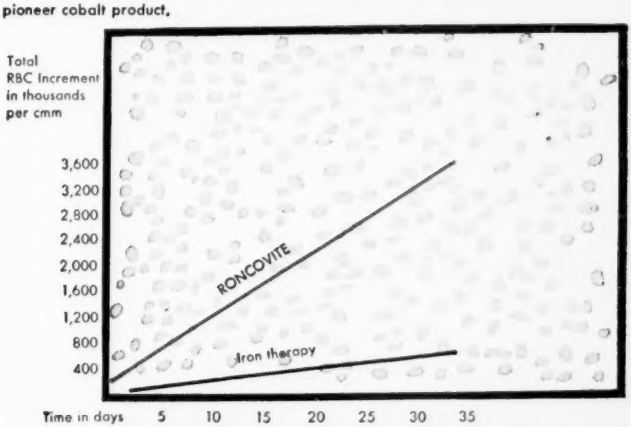
Cobalt chloride (Cobalt as Co....3.7 mg.).....15 mg.
Ferrous sulfate, exsiccated (Iron as Fe....60 mg.).....0.2 Gm.
Average adult dosage—1 tablet after each meal and at bedtime.
Supplied in bottles of 100 tablets.

Drops—each 0.6 cc. contains:

Cobalt chloride (Cobalt...9.9 mg.).....40 mg.
Ferrous sulfate (Iron...15.1 mg.).....75 mg.
Average dose—0.6 cc. (10 minims) diluted with water, milk, fruit or vegetable juice once daily to infants and children.
Supplied in bottles of 15 cc. with calibrated dropper.

1. Wolff, H.: Med. Monatsschr. 5:239 (1951); (2) Rohn, R.J., and Bond, W.H.: to be published; (3) Berk, W., et al: New England J.M. 240:754 (May) 1949: (4) Robinson, J.C., et al: New England J.M. 240:749 (May) 1949; (5) Weissbecker, W., and Maurer, R.: Klin. Woch. 24:855 (1947); (6) Wolff, H., and Barthel, S.: Munch. M. Wschr. 93:467 (1951); (7) Gardner, F.H.: J. Lab. & Clin. M. 41:56 (Jan.) 1953.

*The pioneer cobalt product.



Comparison of the average erythrocyte response of iron-deficiency anemic children to Roncovite and to iron therapy.—Computation—Method of Schiodt: Am. J. Med. Sci. 193:313 (1937).

LLOYD BROTHERS, Inc., Cincinnati 3, Ohio

In the Interest of Medicine Since 1870

Experimental Medicine

Irregular Pregnancies

A rodent isolated at first signs of pregnancy will occasionally deliver 1 litter and subsequently a second after appropriate gestation period. In 4 instances no exposure to adult male animals occurred from the time of the first litter to the unexpected second, explains Florence L. Evans of Baylor University, Houston. Parthenogenesis is improbable since second litters were of mixed sexes. Superfetation late in pregnancy, combined with delayed implantation of blastocysts, may account for the second pregnancy.

Science 117:159-160, 1953.

Dermatology

Treatment of Plantar Warts

In eradication of verrucae plantares, 2 or 3 local applications of a solution of euphorbium are effective. The agent is readily procured from *Euphorbia resinifera,* commonly known as wart weed. Drs. Raymond W. Goldblum and Arthur C. Curtis of the University of Michigan, Ann Arbor, apply a 30% solution of euphorbium in 95% alcohol to the central keratotic area, which is taped for forty-eight hours, when a reapplication is made. Hyperkeratotic material is pared away before each application. Of 60 patients treated, complete disappearance of the wart was reported in all but 2 cases. Histopathologic studies reveal the mechanism to be lysis of the cells of the rete mucosa.

J. Invest. Dermat. 20:45-50, 1953.

Apparatus

Blood Pressure Recorder

A compact device with arterial needle for direct constant measurement of blood pressure is easily made of readily obtainable parts. Drs. Ralph W. Alman of Cambridge City Hospital, Cambridge, Mass., and Joseph F. Fazekas of Georgetown and George Washington universities, Washington, D. C., use an aneroid manometer removed from a blood pressure cuff. A 1.3-cm. length of 0.8-cm. rubber tubing is slipped over the hose nipple of the manometer as a bushing. The open end of a 2-cc. lock-tip syringe barrel is forced over the rubber tube, and a 3-way stopcock is attached to the barrel tip. A 5- or 10-cc. lock-tip syringe filled with heparinized saline solution is attached to the stopcock inlet. The outlet is connected by Tuohy adapter or other fitting to a polyethylene catheter or similar flexible tube. The tube end may be joined to a short-bevel 21- or 22-gauge arterial needle by a lock-tip adapter. The assembly, sterile except for manometer and bushing, is clamped to a stand with the small syringe at arterial level. With proper adjustments, the 2-cc. barrel acts as a pressure chamber and the large syringe as a reservoir. When the artery is punctured, compressed air forces fluid into the vessel until pressure equilibrium is reached. Pulsations of the needle should be barely discernible. Thrombosis is least likely if the femoral artery is employed, but the brachial vessel may be more convenient.

New England J. Med. 248:105-107, 1953.

BASIC
in
Antidiarrheal
Therapy

Arobon®

Whenever diarrhea is encountered in adults, children or infants, and regardless of severity, Arobon is profitably employed as the basic medication. Made from specially processed carob flour, it provides generous amounts of naturally occurring pectin, lignin, and hemicellulose. These complex carbohydrates exert the very actions required for prompt control of diarrheas: They are demulcent, adsorbent, soothing, water-binding.

In simple diarrhea, Arobon suffices as the sole medication. In infectious diarrhea and dysenteries, it is a valuable adjuvant to specific therapy. Arobon is safe, free from side actions, and does not interfere with nutrient absorption.

Simple to Prepare

Arobon is simply prepared: The powder is merely stirred into milk or water, forming a highly palatable drink. Suggested doses: for children and adults, 1 to 2 level tablespoonfuls in milk or water; for infants, 2 to 4 level teaspoonfuls boiled in water.

AROBON
is supplied in 5 ounce jars and is available through all pharmacies.

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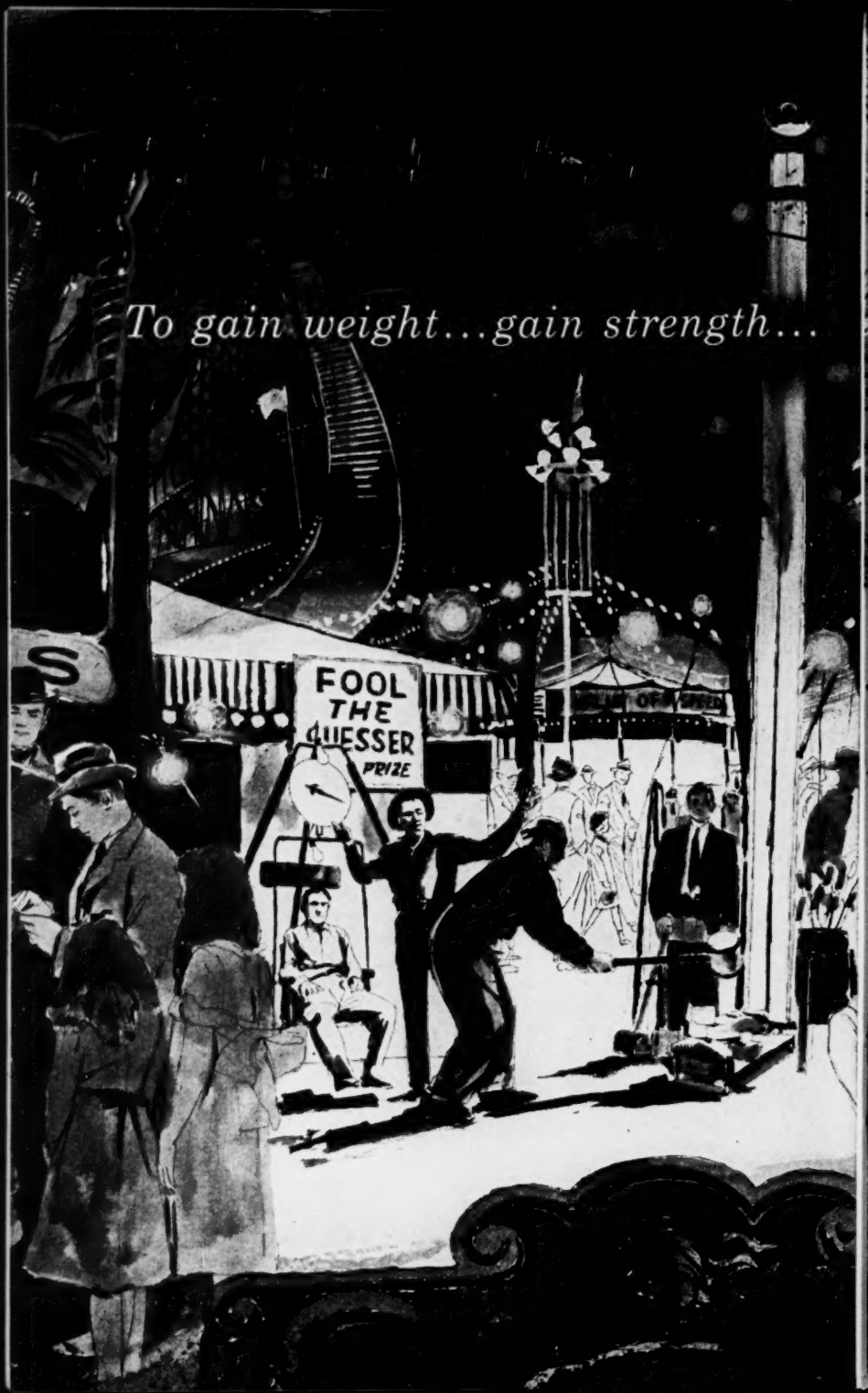
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GUESSER
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TRADEMARK

[ORAL FAT EMULSION SCHENLEY]

A highly palatable emulsion containing 50 percent coconut oil and 12½ percent sucrose, useful whenever caloric intake must be increased without undue increase in bulk.

Delicious alone, or when taken with milk and other fluids, semisolid foods, and desserts.

EDIOL* furnishes 600 calories daily, when taken as 2 tablespoonfuls q.i.d. The unusually small particle size of EDIOL (average, 1 micron) favors easy digestion, rapid assimilation.

For children, or where fat tolerance is a problem, small initial dosage may be prescribed, then increased to the level of individual capacity.

Available through all pharmacies, in bottles of 16 fl.oz.

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Apparatus

Nontraumatic Flowmeter

An electronic device placed over an artery or vein measures speed and amount of blood flow, if vessel caliber is known. Sound waves are sent through the stream between a pair of pea-sized crystals, each of which transmits and receives impulses in turn. Invented by Henry P. Kalmus of the National Bureau of Standards, Washington, D.C., the instrument provides data on deep as well as superficial circulation. Spacing between crystals and temperature of the medium under study do not require critical adjustment. Since behavior of gas can also be determined, the flowmeter gives information on air conditioning and ship or aircraft movement. Knowledge useful in battle injury and supersonic flight problems may be provided.

Hematology

Thromboplastin Component

Previously unrecognized hemorrhagic disease is characterized by prolonged coagulation time resulting from delayed formation of thrombin. All known coagulation factors are normal in patients with this blood dyscrasia. Tests for prothrombin and prothrombin conversion accelerators are also normal, but prothrombin utilization is impaired. Dr. Sidney G. White and associates of the University of California, San Francisco, report that the addition of tissue thromboplastin or platelet-poor hemophilic plasma completely corrects the defect, and conclude that the missing factor is a plasma thromboplastin component (PTC). The disease is similar to hemophilia but is readily distinguishable by the fact that normal serum, the fraction of plasma saturated with 45 to 50% ammonium sulfate, citrate eluate of barium sulfate mixed with normal plasma, and hemophilic plasma correct PTC deficiency, but do not change clotting time of hemophilic blood samples.

Blood 8:101-124, 1953

Orthopedics

Therapy of Bursitis

Prompt relief of pain and rapid subsidence of swelling associated with inflamed bursae are effected by single injections of hydrocortisone acetate (compound F). The swollen area is partially aspirated and 12.5 mg. of compound F in a 0.5-cc. volume is injected directly into the site, report Drs. Edward D. Henderson and Charles C. Henderson of the Mayo Clinic, Rochester, Minn. Of 15 patients treated for olecranon, prepatellar, or pretibial bursitis, 13 were relieved of pain by gradual disappearance of fluid. Improvement was noted within twenty-four hours in some instances. The technic has advantages over the method of repeated aspirations followed by pressure dressings, and is an office procedure requiring little or no anesthesia. Compound F is limited, however, to treatment for traumatic bursitis and is probably inadvisable for infectious conditions.

Minnesota Med. 36:142-144, 1953.

Nellie Nifty, R.N.

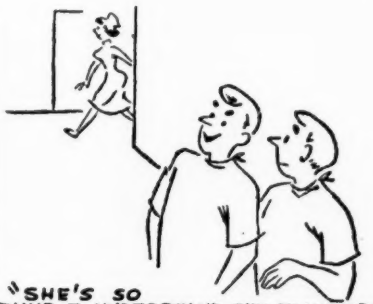
by kaz

"WHAT'S THE ANTIDOTE FOR A LOVE POTION?"

"THE NURSES' HOME IS THIS WAY!"

"ONE THING, I CAN TRUST HIM ALONE WITH ME."

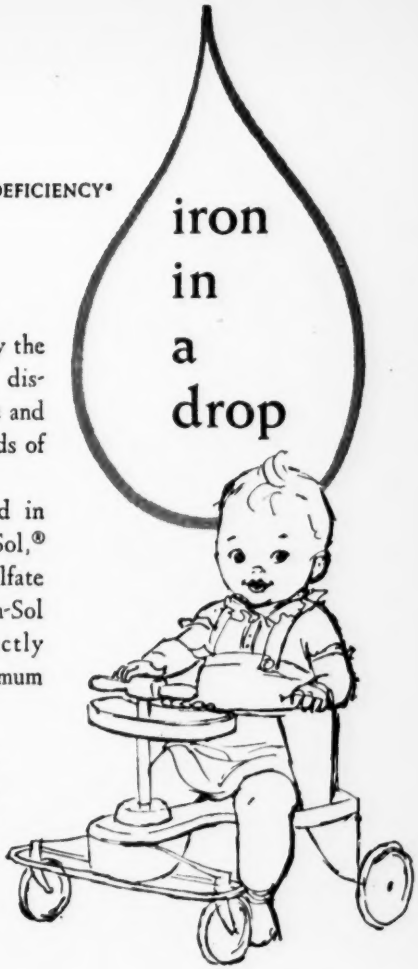
"I'M GLAD I MARRIED A DOCTOR. I CAN BE SICK FOR NOTHING!"



"SHE'S SO DUMB I UNDERSTAND SHE FLUNKED HER CIGARETTE TEST!"

FOR "PERHAPS THE MOST COMMON DEFICIENCY"

iron in a drop



Iron deficiency anemia, "probably the commonest nutritional deficiency disease,"[1] occurs frequently in infants and children, particularly during periods of rapid growth.[2,3]

A specific response is obtained in these cases with the use of Fer-In-Sol,® a *concentrated* solution of ferrous sulfate for convenient drop dosage. Fer-In-Sol is well tolerated, blends perfectly with fruit juices, and leaves minimum after taste.

(1) Youmans, J. B., in Handbook of Nutrition, Chicago, American Medical Association, 1951, p. 577; (2) Hansen, A. E., in Mitchell-Nelson Textbook of Pediatrics, ed. 5, Philadelphia, W. B. Saunders Co., 1950, p. 106; (3) Heck, F. J.: J.A.M.A. 148: 783, 1952.

0.6 cc. contains 75 mg. (about 1 grain) ferrous sulfate. Available in 15 and 50 cc. bottles with calibrated dropper.

Fer-In-Sol

MEAD

MEAD JOHNSON & COMPANY
Evansville 21, Ind., U. S. A.

Pulvules 'Reticulex' provide potent oral therapy for all anemias which will respond to known therapeutic measures.

Each pulvule contains:

Liver-Stomach Concentrate, Lilly	400	mg.
Vitamin B_{12} (Activity Equivalent)	10	mcg.
Ferrous Sulfate, Anhydrous	200	mg.
Ascorbic Acid	50	mg.
Folic Acid	0.33	mg.

For pernicious anemia: Prescribe 2 pulvules three times a day to start; then adjust to maintain a normal blood picture.

For other anemias: 1 or 2 pulvules three times a day.

Lilly

Contains therapeutic quantities of all the known antianemia principles.

PULVULES

Reticulex

(LIVER, B_{12}, IRON, AND VITAMINS, LILLY)

LATE REPORTS *from Medical Centers*

★ ST. LOUIS UNIVERSITY--Production of vaccines in fertile eggs may be increased by roentgen treatment. Typhus rickettsiae multiply earlier and more abundantly under irradiation. Dr. Donald Greiff also observes that irradiated organisms grow freely at 104° F., in contrast to late, scanty development at this temperature without rays. Inhibiting effects of streptomycin are prevented by such treatment, though not those of penicillin, aureomycin, and PABA.

★ UNIVERSITY OF WISCONSIN, Madison--The virus of Newcastle disease, commonly thought to affect poultry alone, can also produce human illness. Laboratory and packing plant workers exposed to the virus may have minor eye infections, occasionally sore throat or coryza, and, rarely, more severe involvement. Dr. Robert W. Quinn and associates noted spread and persistent activity of the virus in several organs without actual symptoms. Such a characteristic may enable virulent mutants to arise and become a serious public health problem.

★ UNIVERSITY OF CALIFORNIA, Los Angeles--Carbomycin, an antibiotic obtained from a soil fungus, may be useful when organisms have become resistant to other antibiotics. Potency in laboratory and clinic was evaluated by Dr. William Hewitt. The drug is especially effective against staphylococcic, pneumonic, and other respiratory infections that are no longer responsive to penicillin, aureomycin, or terramycin and may be useful for amebic dysentery and rickettsial diseases such as Q fever.

★ OREGON STATE COLLEGE, Corvallis--Some cellular growth in rats is almost stopped by 3 of the 4 nucleotides that unite to form nucleic acid. Dr. Ernst J. Dornfeld finds that development of 2 kinds of tissue, obtained from embryonic rat ovaries and young rat ears, is retarded by cytidylic, guanylic, and adenylic acids but not by uridylic acid.

★ UNIVERSITY OF CHICAGO--Localization of isoniazid in 3 tuberculous patients was observed by Dr. Robert H. Ebert and associates, who tagged the drug with radioactive carbon 14. More of the dose was detected in skin and lungs than in bone and fatty tissues. Effective quantities persisted in blood for twenty-four hours after administration, although levels fell rapidly after the first eight hours. Concentrations remained high in diseased areas for three to five hours. In vitro, tubercle bacilli exposed to isoniazid doubled in number then ceased to multiply. In contrast, streptomycin halted bacterial growth almost at once and began to destroy organisms in three days.

★ UNIVERSITY OF CALIFORNIA, Los Angeles--Capillaries deteriorate after the age of 20 years, and extreme fragility is noted in more than 70% of healthy people past 60 years. Drs. Daniel J. Perry and Irwin Linden employ the Rumpel-Leede test with a blood pressure cuff to determine fragility of small blood vessels.

★ UNIVERSITY OF LEEDS, England--Influenza virus in tissue cells forms complex inclusion bodies visible only under the electron microscope. In these aggregates, Dr. L. Hoyle of the Public Health Laboratory, Northampton, and Drs. R. Reed and W. T. Astbury, Leeds, identify particles bearing the complement-fixing antigen and also particles carrying the viral fraction responsible for agglutination of red blood cells.

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in asthma and hay fever

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Formulae:

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Phenobarbital . . . . 1/4 gr.
(Warning—May be habit-forming)
Ephedrine Sulphate . 3/8 gr.
Potassium Iodide . 2-1/2 gr.
Calcium Lactate . . 2-1/2 gr.

HISTA-NOVALENE

Sodium Phenobarbital 1/4 gr.
(Warning—May be habit-forming)
Ephedrine Sulphate . 3/8 gr.
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GERMANY

Differential Diagnosis of Jaundice by Ether. Bilirubin extraction with ether is useful in determining the cause of jaundice. A positive reaction practically excludes the diagnosis of simple hepatitis and indicates probable obstruction by malignant growth.

Drs. Adolf Kühn and Joachim Pirwitz of the University of Freiburg, Germany, find that results are negative in 95% of uncomplicated hepatitis, no matter how high the serum bilirubin level. Equivocal reaction is likely with subacute liver dystrophy and cirrhosis.

With obstructive jaundice from cancer the reaction is positive in most cases. However, if the obstruction is not caused by tumor, the test usually has negative results in the beginning and tends to become positive only if the icterus persists at least two weeks and the serum bilirubin reaches about 10 mg. per cent.

To perform the test, 1 cc. of serum is mixed with 2 cc. of pure ether and shaken vigorously about one hundred times. The mixture is then allowed to stand until the supernatant ether layer separates and all the serum-ether mixture flows down from the wall of the test tube. Results are considered negative if the ether layer remains colorless; doubtful, if only slightly colored; and positive if a definite yellow-green appears.

The ether solubility of bilirubin is partially dependent on the *p*H of the blood, increasing with a shift to the acid range.

2

Riboflavin in Therapy of Porphyria. Congenital porphyria may be successfully treated by riboflavin, which acts as a catalyzer and regulator in the synthesis of porphyrins, favoring the formation of protoporphyrin III and inhibiting simultaneously that of porphyrin I. Dr. W. Stich of the University of Munich finds that daily doses of 10 to 40 mg. of vitamin B_2 greatly reduce the excretion of coproporphyrin and uroporphyrin after the first intravenous administration.

Photosensitivity disappears in a few weeks and photodermatitis improves, as well as the patient's general condition. Discontinuation of riboflavin causes a reappearance of the symptoms, which, however, subside promptly with reinstitution of treatment.

The effect of riboflavin is often increased by the addition of 100 to 200 mg. of nicotinamid daily.

No untoward effects have been noted even after one and a half years of treatment, and a total

(Continued on page 206)

more

assured

with this new therapeutic combination

White's

A-P-Cillin

A recent clinical evaluation* of the effectiveness of certain drug combinations in acute upper respiratory infections, including the "common cold," clearly demonstrated A-P-Cillin to be, by far, the superior preparation.

It was found that 97.5% of the patients receiving A-P-Cillin were completely asymptomatic or improved at the end of the 72 hour treatment period.

Other commonly used preparations brought only 54% and 47% relief by the end of the same period.

To relieve distressing nasopharyngeal and constitutional symptoms, and to prevent secondary upper respiratory complications, prescribe—

White's A-P-CILLIN

Each tablet contains:

Procaine Penicillin G		100,000 units
APC	Acetylsalicylic acid	2½ gr.
	Phenacetin	2 gr.
	Caffeine	½ gr.
Phenyltoloxamine Dihydrogen Citrate (antihistamine)		25 mg.

The usual adult dose of A-P-Cillin is 2 tablets administered three times per day. Clinical experience indicates that treatment should be continued for not less than seventy-two hours. For optimal effect, the tablets should be taken at least one hour before or two or more hours after meals.

White Laboratories, Inc., Kenilworth, N. J.

*McLane, R. A.: Clinical Evaluation of Combined Drug Therapy in Acute Upper Respiratory Infections, J. M. Soc. N. J. 49:509 (Dec.) 1952.

dosage of about 5,400 mg. of vitamin B_2. Good results have also been achieved in the acute form of porphyria.

Considering porphyria as a metabolic disease, continuous treatment is necessary, as for diabetes.

3

Acetylcholine Ointment for Eye Diseases. Though the vasodilatory action of acetylcholine by local application has proved of great value in treating eye conditions, the instability of the agent has limited the use. Dr. W. Hallermann of the University of Freiburg, Germany, reports the employment of a long-acting acetylcholine ointment with choline chloride as the stabilizer. The ointment is used in a 2% strength and has the following composition:

Acetylcholine chloride	0.2 gm.
Choline chloride	5
Distilled water	2
Cetylic ointment ad.	10

When applied to the eye, the ointment produces pronounced hyperemia of the conjunctiva, often followed by slight lid edema, both of which subside in about five hours. Intraoculary pressure is not altered. The improved blood supply and direct stimulation of the cell by acetylcholine are the important factors contributing to the healing process.

Depending on the condition, the ointment is usually applied every four hours; the length of treatment varies from three or four days to three weeks.

Best results are obtained in the treatment of acid and alkaline eye injuries, in which ischemia is a major factor. Good effects are also observed in keratitis and herpes corneae, the scarring and corneal damage being quite considerably decreased.

"Speak up, Mr. Johnson. What's your trouble?"

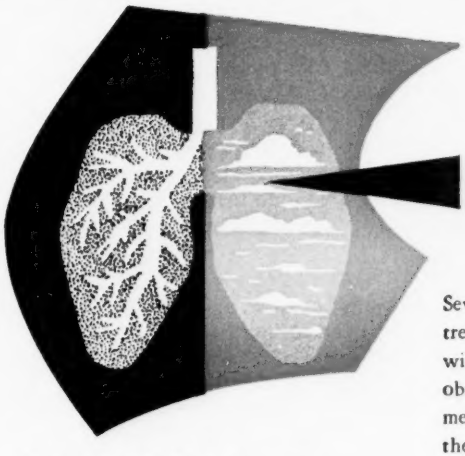
FRANCE

Anastomosis after Total Colectomy. An ileo-anal and ileo-ileal anastomosis obviates many of the inconveniences of the simple ileostomy used with total colectomy.

Depending on the patient's condition, the operation is performed in 1 or 2 stages, explains Dr. M. Champeau of Paris. If the patient is debilitated, ileostomy is performed and an attempt made to improve the general condition before the later procedure.

After colectomy and ampullectomy, a laterotermínal ileo-anal anastomosis is performed about 50 to 70 cm. proximal to the distal end of the ileum. The anastomosis

The most significant result in the treatment of *Bronchial Asthma*



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Advantages

Administered as Easily as Insulin:
Subcutaneously or intramuscularly with a minimum of discomfort.

Fewer Injections:
One or two doses per week in many instances.

Rapid Response, Prolonged Effect:
Combines the two-fold advantage of sustained action over prolonged periods of time with the quick response of lyophilized ACTHAR.

Much Lower Cost:
Recent significant reduction in price, and reduced frequency of injections, have advanced economy of ACTH treatment.

Severe bronchial asthma can now be treated in the home and in the office with a degree of success similar to that obtained with hospital care. Improvement is prompt and dramatic. Neither the patient's age nor the chronicity of the asthmatic condition detracts from the efficacy of ACTHAR treatment, which has stood the most severe of all tests of usefulness—the requirements of the general practitioner. The use of the disposable cartridge syringe—an immediately available form of HP* ACTHAR *Gel*—can be a life-saving measure in the medical emergency which suddenly arises in the course of long-standing "intractable" asthma. HP*ACTHAR *Gel* has demonstrated its superiority over customary measures in many instances of bronchial asthma, and has brought about gratifying remissions lasting as long as 18 months.

*Highly Purified. ACTHAR® is The Armour Laboratories Brand of Adrenocorticotropic Hormone—ACTH (Corticotropin).

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

is best done by the transanal approach, with the patient in lithotomy position. The terminal ileum is then anastomosed terminolaterally about 50 to 70 cm. above the anal anastomosis. An ileo-ileal isoperistaltic circle is formed.

After completion of the anastomoses, the openings in the mesentery are closed to prevent strangulation of loops of small bowel. The lesser pelvis is peritonealized, leaving about half the created ileal circle in the abdominal cavity and the other half in the pelvis.

As a functional result, the fecal masses are retained by the anal sphincter and lodge in the loop created by the distal ileum. The peristaltic waves cause part of the feces to reenter the descending part of the ileum and repeat the circle. Hence better fluid absorption is achieved. The distal loop, being always full, enlarges and undergoes gradual colonization.

The patient becomes more and more continent, is relieved from painful colic and frequent stools, and is able to resume normal life.

2

Chloramphenicol and Reticuloendothelial System. A stimulating action is exerted on the reticuloendothelial systems of animals by relatively small doses of chloramphenicol, 10 mg. per kilogram. Drs. C. Teodoru and Th. Feyel-Cabanes, of Roussel Laboratories, Paris, find that the number of Kupffer cells in the animal's liver increases as

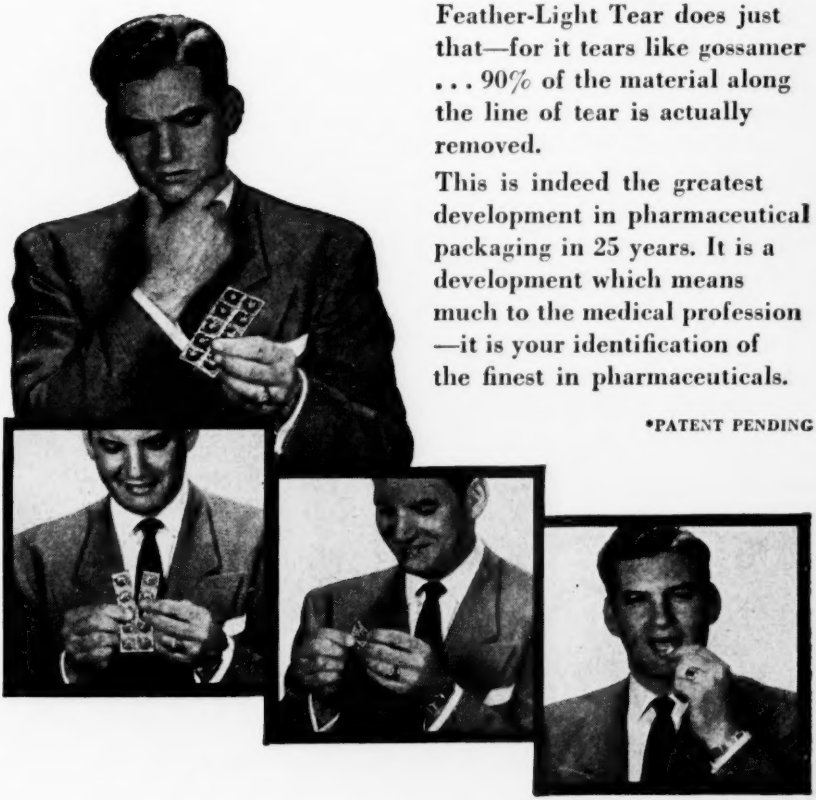
acceptance helps the cure

If your patient's first reaction to your prescribed therapy is, "How easy—how easy—how easy to take," you have gone a long way toward gaining increased cooperation.

The new Ⓤ Super-Sealtite* Feather-Light Tear does just that—for it tears like gossamer . . . 90% of the material along the line of tear is actually removed.

This is indeed the greatest development in pharmaceutical packaging in 25 years. It is a development which means much to the medical profession —it is your identification of the finest in pharmaceuticals.

*PATENT PENDING



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"Hold your arm steady."

"Yipe!"

"That time I was just sterilizing your arm with alcohol. Now we'll put the needle in."

well as the phagocytic activity of the spleen. The blood level of indirect bilirubin and the excretion of bile pigments by the liver are augmented. After use of chloramphenicol, the leukocytosis provoked by intravenously injected India ink is increased.

HUNGARY

Coagulum in Chronic Osteitis. A coagulum of autogenous blood and antibiotics to fill the surgically cleaned bone cavity is easy to use and effective for treatment of chronic osteitis and osteomyelitis. A massive clot of high calcium content is provided with a dense meshwork. The immigration of fibroblasts is promoted and bone reconstruction accelerated. Dr. L. Winter of Budapest University describes the operation as follows:

Antibiotic treatment is started twenty-four to forty-eight hours preoperatively. To determine the exact location of the focus, sounds are introduced into the sinus tracts and roentgenograms made. Injection of methylene blue into the sinus will trace the ramifications. The shortest route into the focus is chosen. The fistulous tract is always excised.

The cavity is thoroughly cleansed of sequestra, detritus, and granulation tissue mechanically; then tissue debris is eliminated by rinsing with normal saline. From 5 to 20 cc. of blood, depending on the size of the cavity, is withdrawn from the pa-

(Continued on page 214)

POWER

When nutritional deficiencies develop, potencies of from 5 to 10 times the daily maintenance requirements of all lacking nutrients must be supplied. [1]

Each VITERRA THERAPEUTIC capsule contains Vitamins, Minerals and Trace Elements in the high dosages necessary for rapid and complete correction of nutritional deficiency states.

EACH CAPSULE CONTAINS

VITAMIN A	25,000 U.S.P. Units
VITAMIN D	1,000 U.S.P. Units
VITAMIN B_{12}	5 mcg.
VITAMIN B_1	10 mg.
VITAMIN B_2	5 mg.
NIACINAMIDE	100 mg.
VITAMIN C	150 mg.
CALCIUM	103.0 mg.
COBALT	0.1 mg.
COPPER	1.0 mg.
IODINE	0.15 mg.
IRON	10.0 mg.
MAGNESIUM	6.0 mg.
MANGANESE	1.0 mg.
MOLYBDENUM	0.2 mg.
PHOSPHORUS	80.0 mg.
POTASSIUM	5.0 mg.
ZINC	1.2 mg.

Therapeutic

MINERAL THERAPY

536 LAKE SHORE DRIVE, CHICAGO 11, ILLINOIS

tient's vein, mixed with 200,000 units of powdered penicillin, and coagulated by the addition of 1,000 units of thrombin for each 10 cc. of blood.

In the presence of penicillin-resistant and gram-negative microorganisms, a combination of penicillin and streptomycin is applied. Streptomycin prevents clot formation so the drug is either inserted into the cavity before the coagulum or 0.5 gm. of fibrin is added to the blood to promote clotting.

Before the coagulum is put into the cavity, sutures are placed through all layers to enable quick closure of the wound and prevent the clot from sliding out. After primary skin closure, a cast is applied and left for ten to twelve days, during which parenteral antibiotic treatment is continued.

In 56 cases, only 4 repeat operations were required. As large excavations are avoided and the defect is covered with several layers of tissue, trauma is diminished. Bone restoration is quickened.

The scars do not adhere to the bone too firmly and so are satisfactory cosmetically.

"I hope you won't feel badly, Doctor, but I read your book on advanced psychiatry and understood every *word."*

SODIUM ETHALYL

QUICK AND LONG LASTING HYPNOTIC

Ethalyl combines quick acting pentobarbituric acid with long acting phenobarbital. The balanced proportions of these two overlapping hypnotics act synergistically to put and keep your patient asleep.

Sodium Ethalyl is available as powder, and in blue and white combination capsules of 2 grains. Write on your letterhead for professional sample and literature.

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Physicians' sample of the new Premo specialty.

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Please rush me sample of your new product — Sodium Ethalyl.

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Doctor to Doctor

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The April 15 winner is

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"When she called for an appointment she said, 'I do hope you will get me pregnant.'"

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a new, big

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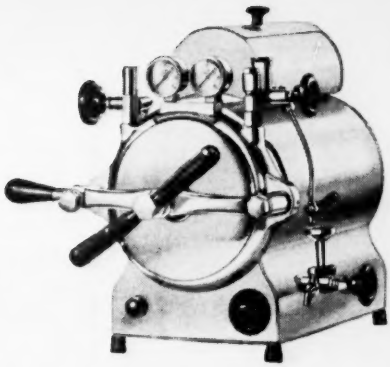

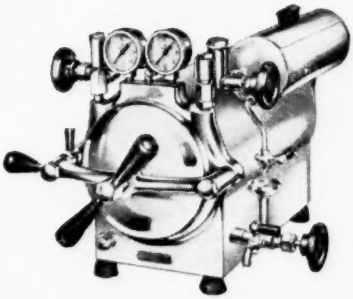

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Ask your dealer today about Pelton HP-2.

PELTON

THE PELTON & CRANE CO., DETROIT 2, MICHIGAN

Forensic Medicine

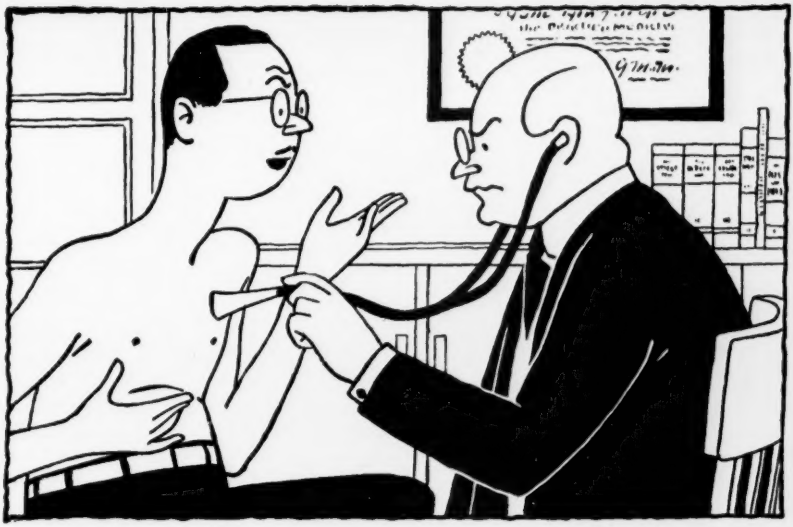
(Continued from page 52)

PROBLEM: In Texas, right to start a malpractice suit "outlaws" unless the suit is brought within two years after right to sue accrues. Abdominal surgery was performed in September 1947. A month later an exploratory operation was done to determine the cause of unsatisfactory recovery. Six weeks later part of a gauze sponge worked its way through an incision and the doctor removed the sponge in December 1947. In May 1948, he paid the patient $750, took release, and treatment ceased. A month later a postoperative rupture appeared and the doctor advised that operation be deferred for two years. Three years later, the patient sued for damages, asserting that release had been executed under the doctor's assurance that the patient was "practically well." Was the suit brought too late?

COURT'S ANSWER: Yes.

The Texas Court of Civil Appeals, Fort Worth, cited a decision of the Texas Supreme Court to the effect that a suit for negligent failure to remove a sponge was barred when not brought until four years later, when the patient discovered what had happened. Also cited were decisions to the effect that running of the two-year period is not suspended because of delay in fully ascertaining the extent of damage resulting from negligence (252 S. W. 2d 486).

The Texas court distinguished decisions of the supreme courts of Ohio, Minnesota, and Missouri, where running of similar statutes was declared suspended during the time that the patient was treated by the same doctor after the alleged malpractice. The first two cases involved continued attempts



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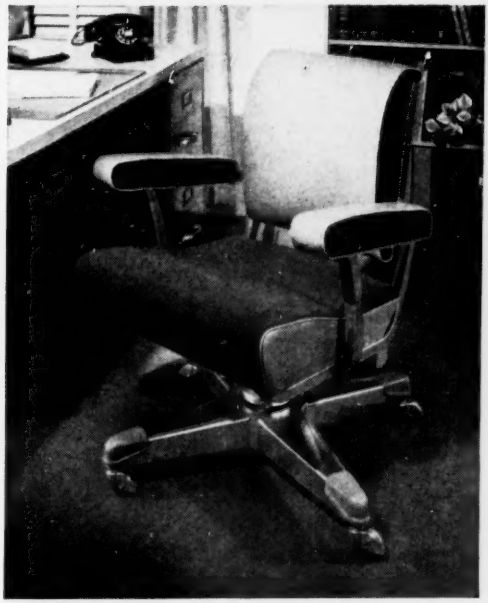
to reduce bone fractures, and the third suit was brought immediately upon the patient's discovery that a needle had been left in her body after an operation (252 S. W. 2d 486).

PROBLEM: A surgeon treated a fracture of a tibia and a fibula by applying a cast from thigh to toes. He wrapped the cast to a point well below the knee and entrusted completion of wrapping to an orderly. Could the surgeon be held liable on a theory of malpractice because the patient suffered somewhat after the wrapping was completed and later had pleurisy?

COURT'S ANSWER: No.

The Alabama Supreme Court upheld the action of a trial judge in ordering a jury to return a verdict in favor of the doctor for insufficiency of evidence tending to show malpractice. The higher court concluded that it would have been a matter of sheer conjecture to assume that the orderly had wrapped too tightly or twisted and hurt the patient's leg. The court said that even if the orderly or the hospital authorities were negligent that would not render the doctor liable; that the surgeon was no more responsible for the patient's postoperative comfort than the family doctor who attended the patient; and that neither doctor could be held liable for malpractice merely because pain happened to ensue (61 So. 2d 690).



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PROBLEMS: [1] Was evidence obtained to prove criminal abortion under a search warrant inadmissible in a prosecution because the warrant was not exhibited to the accused doctor until after he had been taken into custody? [2] Could mere belief that an abortion would be legal constitute a valid defense, the operation having been performed without consultation, and without being satisfied that the fetus was dead and that no other method would promote the woman's safety?

COURT'S ANSWERS: NO.

The Maryland Court of Appeals decided that ample evidence had been produced to sustain convictions of a doctor, his nurse, and his secretary for joint participation in an illegal operation (88 Atl. 2d 556).

PROBLEM: Was a woman accused of murder entitled to a privite examination by a psychiatrist of her own selection?

COURT'S ANSWER: Yes.

A trial court had refused to permit an examination unless made in conjunction with alienists appointed by the court. The California Supreme Court directed that accused be accorded a private examination as requested.

The higher court mentioned its earlier decision that when medical advice is required to interpret a client's condition to his attorney, information discovered upon a private examination of the client by a physician employed by the attor-

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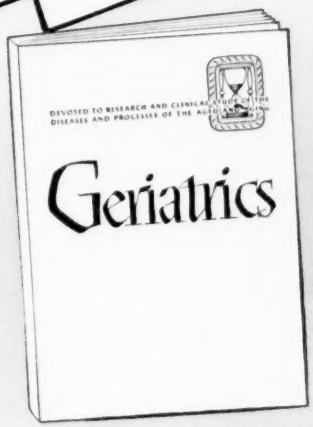

Geriatrics

DR. WALTER C. ALVAREZ, EDITOR

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ney falls within the scope of the rule of law protecting communications between attorney and client. The court reasoned that "the same general policy underlies both the right to consultation in private and the privilege against disclosure" (238 Pac. 2d 561).

PROBLEMS: A Montana clinic partnership converted into an association, having continuous existence despite withdrawal of members, and being managed by a committee. [1] Was the association a "corporation," within the meaning of the federal income tax law, thereby making a reserve fund for a coming year the sole property of the association and exempting each member from necessity for including in his income tax such portion of the fund as would be chargeable to him if the concern had been a partnership? [2] A pension fund was constituted exclusively by contributions of the association. Were amounts paid into the fund for the benefit of eligible member beneficiaries subject to income taxes against them for the years within which payments were made?

COURT'S ANSWERS: [1] Yes. [2 No.

This decision by the U. S. District Court, Montana, Missoula Division, involved an interpretation of various federal income tax regulations in the light of the precise nature of the association. Therefore, it should not be relied upon as necessarily applying to similar organizations, without a careful determination of decisive facts.

Incidentally, the court concluded that the status of each practicing member was that of an "employee" of the association, because he had no readily transferable interest in the association and was subject to office hours, vacation allowance, and so on, fixed by the governing authorities (107 Fed. Supp. 976).

PROBLEM: The day a dog bit a man tetanus serum was administered and four or five days later the man became ill, had swelling and itching, and was weak and nervous. In a damage suit by the patient against the owner of the dog, could a jury attribute the illness to treatment necessitated by the bite, as distinguished from the result of the bite, without the aid of medical expert testimony?

COURT'S ANSWER: No.

The Oklahoma Supreme Court said that in the absence of expert testimony, a jury finding that the illness was the reaction to necessary treatment would be merely speculative or conjectural (238 Pac. 2d 814).

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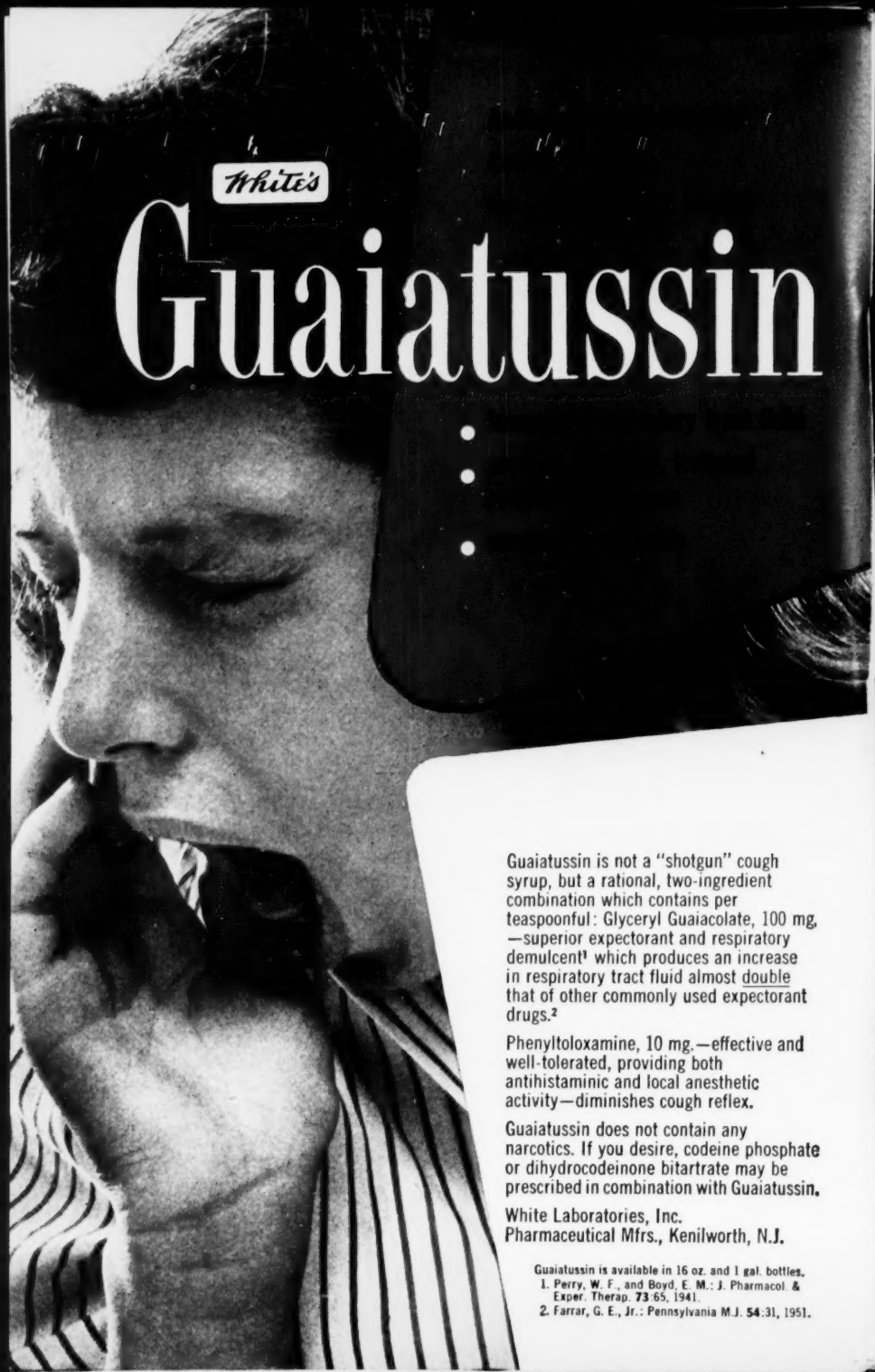

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1. Perry, W. F., and Boyd, E. M.: J. Pharmacol. & Exper. Therap. **73**:65, 1941.
2. Farrar, G. E., Jr.: Pennsylvania M.J. **54**:31, 1951.

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LEHRBUCH DER INNEREN MEDIZIN *edited by* Helmut Dennig. 2d ed. 2 vols., 2,033 pp., ill. Georg Thieme, Stuttgart. 82 DM.

RHEUMATISCHE ERKRANKUNGEN: ENTSTEHUNG UND BEHANDLUNG *by* Max Hochrein. 2d ed. 416 pp., ill. Georg Thieme, Stuttgart. 36 DM.

Neurology

DESIGN FOR A BRAIN *by* W. Ross Ashby. 259 pp., ill. John Wiley & Sons, New York City. $6

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MANUAL OF GYNECOLOGY *by* E. Stewart Taylor. 204 pp., ill. Lea & Febiger, Philadelphia. $4.50

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CHILD PSYCHOTHERAPY *by* Samuel Richard Slavson. 331 pp. Columbia University Press, New York City. $4.50

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PROGRESS IN OPHTHALMOLOGY AND OTOLARYNGOLOGY: A QUADRENNIAL REVIEW, VOL. I, 1952 *edited by* Meyer Wiener *et al.* 666 pp., ill. Grune & Stratton, New York City. $15

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DISEASES OF THE CHEST *edited by* Sir Geoffrey Marshall *and* Kenneth M. A. Perry. 2 vols., 919 pp., ill. Butterworth & Co., London. £7 7*s.*

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1. Slinger, W. N., and Hubbard, D. M. (1951), Arch. Dermat. & Syph., 64:41, July.
2. Slepyan, A. H. (1952), Ibid., 65:228, February.
3. Ruch, D. M. (1951), Communication to Abbott Laboratories.

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"That was my first experience," remarked the old man. "I was born there."—A.S.

Sympathetic

A grizzled old prospector came down out of the mountains after months without a shave, haircut, or bath and ambled into my office. The odor was so strong that my nurse rushed over to open a window.

"Ah don't blame ye, sister," observed the old codger. "Hit shore smells like somethin' died in here."—A.S.

"If I were you, I'd see a doctor."

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My receptionist thanked her stars she had merely asked her to repeat herself and had not asked the question she had intended: "I'll have to see your proof. Could you show it to me, please?"—G.J.

On Second Thought

A patient with chronic myelogenous leukemia was among the first to be treated with nitrogen mustard, a therapy that often has uncomfortable side effects. This particular man was a little miffed at the great interest centered mainly on his chart. Finally he cornered me.

"Everybody reads my chart. How come no one asks me how I feel?"

I was a little taken aback. "Well, tell me, how *do* you feel?" I asked.

He paused, evidently thinking deeply, then shook his head, "Don't ask!"—G.J.B.

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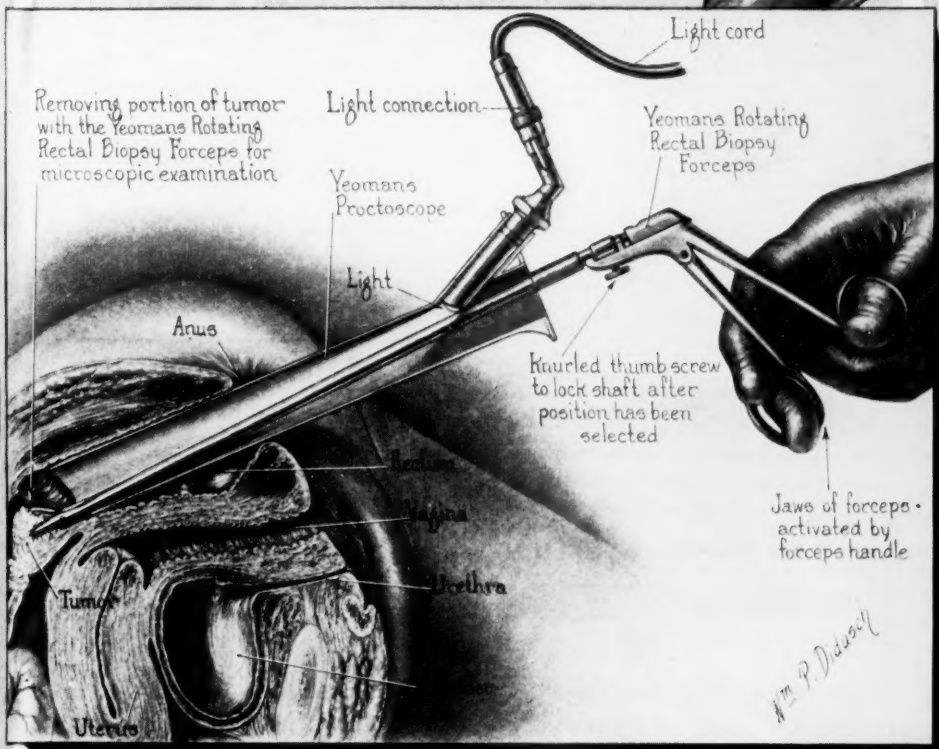

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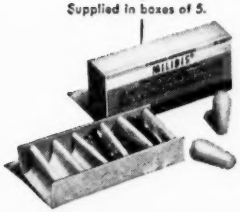
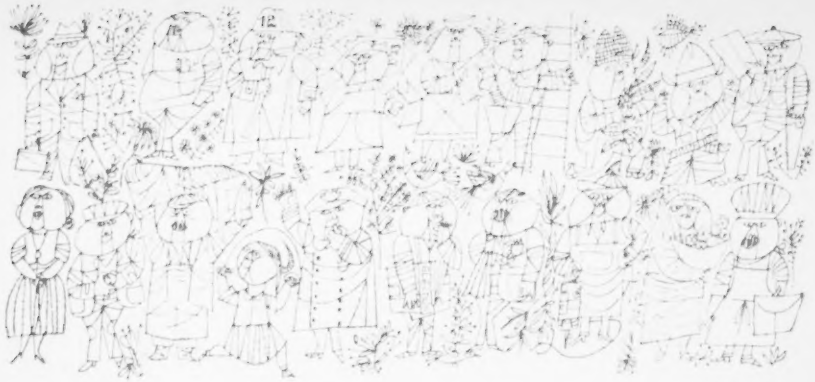
Average Dose: One suppository inserted every other night, before retiring, for five doses. An acid douche should be used on the alternating nights. In some cases, it may be necessary to extend or repeat the course.

Supplied in boxes of 5.



WINTHROP-STEARNS INC.
NEW YORK 18, N. Y., WINDSOR, ONT.

Milibis, trademark reg. U. S. & Canada, brand of bismuth glycollylarsanilate



speaking of allergy, let's get down to cases

The documented record – more than 900 reports – shows literally thousands of allergic patients relieved of symptoms by Pyribenzamine. Relief has been prompt and prolonged, with extremely low incidence of sedation or other side reactions.

On the basis of published evidence, no other antihistamine combines greater clinical benefit with greater freedom from side effects. *Supplied:* Pyribenzamine hydrochloride (tripelennamine hydrochloride Ciba) 50 mg. (scored) tablets, bottles of 100 and 1000.

Pyribenzamine®

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